

ACQUISITION OF FIP RESOURCES

DESK REFERENCE



FEDERAL ACQUISITION INSTITUTE

OFFICE OF ACQUISITION POLICY

**FAC 90-26
FIRMR TC 90-11**

ACKNOWLEDGMENTS

*Prepared for the Federal Acquisition Institute
Pursuant to a contract with CAE-Link Corporation
Falls Church, Virginia*

Michael Miller, Director
Federal Acquisition Institute

Jeritta Parnell
Federal Acquisition Institute
Project Manager

in coordination with
Bob Boyd
Army Logistics Management College

FAI would also like to thank the following for their assistance in preparing and reviewing this text.

Michele Templeman
Defense Commissary Agency

Eugene Feinberg
U.S. Department of Agriculture
Office of Operations

Richard Frederick
Defense Logistics Agency
DASC—Office of Contracting

Richard Gamble
U.S. Coast Guard
Commandant

Clem Munno
Department of Transportation
Federal Aviation Administration

Kevin Smullen
General Services Administration
Office of Acquisition Policy

ACQUISITION OF FIP RESOURCES

CONTENTS

ACKNOWLEDGEMENTS	i
------------------	---

PREFACE	xix
---------	-----

CHAPTER 1		
STATUTES THAT APPLY TO THE ACQUISITION OF FIP RESOURCES		
SECTION	TITLE	PAGE
1.1	How the Federal Information Processing Resources Acquisition Process Is Affected by Statutes, Regulations and Policies	1-5
1.2	How FIP Acquisitions Differ from Other Types of Federal Acquisitions	1-7
1.3	Impact of Key Statutes on Acquisition of FIP Resources	1-9

CHAPTER 2		
OMB CIRCULARS THAT APPLY TO THE ACQUISITION OF FIP RESOURCES		
SECTION	TITLE	PAGE
2.1	OMB Circular A-130, <i>Management of Federal Information Resources</i>	2-5
2.2	OMB Circular A-94, <i>Guidelines and Discount Rates for Benefit-Cost Analysis of Federal Programs</i>	2-8
2.3	OMB Circular A-109, <i>Major System Acquisitions</i>	2-13
2.4	OMB Circular A-127, <i>Financial Management Systems</i>	2-18
2.5	OMB Circular A-76, <i>Performance of Commercial Activities</i>	2-19
2.6	OMB Circular A-11, <i>Preparation and Submission of Budget Estimates</i>	2-24

CHAPTER 3		
POLICIES THAT APPLY TO THE ACQUISITION OF FIP RESOURCES		
SECTION	TITLE	PAGE
3.1	Policies and Regulations that Affect FIP Resources Acquisitions	3-5
3.2	Roles and Responsibilities of Key Participants	3-17
3.3	The Role of the National Institute of Standards and Technology	3-20
3.4	Guides and Research Tools	3-21

CHAPTER 4		
ETHICS ISSUES CONCERNING FIP RESOURCES		
SECTION	TITLE	PAGE
4.1	Principles of Ethical Conduct	4-5
4.2	Laws and Regulations on Standards of Conduct	4-7
4.3	Procurement Integrity	4-14
	4.3.1 Key Definitions	4-15
	4.3.2 Restrictions and Prohibited Conduct	4-21

CHAPTER 5		
THE SYSTEM LIFE CYCLE		
SECTION	TITLE	PAGE
5.1	Concept of the System Life Cycle	5-5
5.2	Phases and Activities in the System Life Cycle	5-11
5.3	Difference between Major Automated Information System Life Cycle and Other Life Cycles (Major Weapon Systems)	5-19

CHAPTER 6		
DEFINITION OF FIP RESOURCES TERMS		
SECTION	TITLE	PAGE
6.1	Definitions of Significant FIP Resources Terms	6-5
6.2	Common Types and Configurations of Hardware, Software, and Telecommunications	6-15
6.3	Major Commercial Suppliers	6-19

CHAPTER 7		
ACQUIRING FIP SERVICES		
SECTION	TITLE	PAGE
7.1	Differences Between FIP Services and FIP Support Services	7-4
7.2	Identifying FIP Services	7-5
7.3	Current Issues Involving the Acquisition of FIP Services	7-9

CHAPTER 8		
ACQUIRING FIP SUPPORT SERVICES		
SECTION	TITLE	PAGE
8.1	Types of FIP Support Services	8-5
8.2	Types of FIP Testing	8-12
8.3	Nonpersonal Services	8-16
8.4	FIPS PUBS and Federal Standards for Testing of FIP Resources	8-23
8.5	Appropriate Use of DIDs in a FIP Resources Acquisition	8-25

CHAPTER 9		
ACQUIRING FIP MAINTENANCE SERVICES		
SECTION	TITLE	PAGE
9.1	FIP Maintenance Services As a Subset of FIP Support Services	9-5
9.2	Categories of FIP Maintenance Services	9-7
9.3	Types of FIP Maintenance Services	9-12
9.4	Sources for Obtaining FIP Maintenance Services	9-15
9.5	Methods for Obtaining FIP Maintenance Services	9-18
9.6	Special Characteristics for FIP Maintenance Services	9-21
9.7	Payment Methods for FIP Maintenance Services	9-26

CHAPTER 10		
ACQUIRING FIP EQUIPMENT		
SECTION	TITLE	PAGE
10.1	Types of FIP Equipment	10-4
10.2	Unique Considerations in Obtaining FIP Equipment	10-7

CHAPTER 11		
INTELLECTUAL PROPERTY AND LICENSING AGREEMENTS		
SECTION	TITLE	PAGE
11.1	Statutes Concerning Intellectual Property	11-5
11.2	Categories of Intellectual Property	11-9
11.3	Types of Licensing Agreements	11-19

CHAPTER 12		
ACQUIRING COMMERCIAL SOFTWARE		
SECTION	TITLE	PAGE
12.1	What is Not Commercial Software	12-7
12.2	Key Terms in Commercial Software Acquisition	12-10
12.3	Categories and Types of Commercial Software	12-11
12.4	Common Pricing Structures and the Effect on Licenses	12-14
12.5	Commercial Software Life Cycle	12-16
12.6	Methods for Acquiring Commercial Software	12-19
12.7	Current Major Issues Involving Commercial Software	12-32

CHAPTER 13		
LAWS AND REGULATIONS APPLICABLE TO TELECOMMUNICATIONS		
SECTION	TITLE	PAGE
13.1	Regulations and Policies That Impact on Acquisition of Telecommunications Resources	13-6
13.2	Rulings Applicable to FIP Resources and the Telecommunications Industry	13-16

CHAPTER 14		
ACQUIRING TELECOMMUNICATIONS		
SECTION	TITLE	PAGE
14.1	Terminology Necessary for Acquiring Telecommunications	14-5
14.2	How to Distinguish between Voice and Data Transmission	14-8
14.3	How to Distinguish between Local Area Networks (LAN) and Wide Area Networks (WAN)	14-9
14.4	Types of Lines	14-10
14.5	Choose the Special Characteristics of a Telecommunications Requirement	14-12
14.6	The Role of Standards in the Telecommunications Area	14-22
14.7	Telecommunications Sources Provided by GSA and Other Than by GSA	14-26
14.8	How to Distinguish the Differences in the Approval Process for the Acquisition of All Types of Telecommunications Services	14-31

CHAPTER 15		
DETERMINATION OF ACQUISITIONS COVERED BY THE FIRMR		
SECTION	TITLE	PAGE
15.1	How to Determine If Proposed Acquisitions Are Covered by the FIRMR	15-4
15.2	“Incidental” <i>versus</i> “Significant” Acquisition of FIP Resources by Government Contractors	15-14
15.3	The Importance of FIRMR Bulletin A-1	15-17

CHAPTER 16		
MARKET RESEARCH FOR ACQUISITION OF FIP RESOURCES		
SECTION	TITLE	PAGE
16.1	How to Assemble and Organize Sources of Information of the FIP Resources Market, and What Data Is Available from Each	16-5
16.2	Gathering Information and Judging the Results	16-13

CHAPTER 17		
CURRENT TRENDS IN ACQUISITION OF FIP RESOURCES		
SECTION	TITLE	PAGE
17.1	Data Relating to Current Trends for FIP Resource Acquisitions	17-4
17.2	Technology Trends, Market Research and the Acquisition Process	17-8
17.3	The Effects of Downsizing, Reductions in Force and Rightsizing	17-12
17.4	Commercial Trends	17-15

CHAPTER 18		
OBsolescence IN THE MARKET PLACE		
SECTION	TITLE	PAGE
18.1	The Effect of Obsolescence in the Market Place and in the Acquisition Process	18-4
18.2	“Outdated” <i>versus</i> “Obsolescence”	18-5
18.3	“Outdated” and “Obsolescence” Based on Commercial Practice	18-9
18.4	Using Sources Available to Determine Whether a Requirement Is for an Item That Is, or Will Soon Be, Obsolete	18-10
18.5	How the Acquisition Process Can Be Used to Prevent FIP Resource Obsolescence	18-13

CHAPTER 19		
COMPUTER SECURITY FOR FIP RESOURCES ACQUISITIONS		
SECTION	TITLE	PAGE
19-1	Impact of Primary Statutes on Computer Security and Privacy	19-10
19-2	Impact of OMB A-130 on Computer Security and Privacy	19-13
19-3	Policy Requirements for Computer Security	19-15
19-4	Common Computer Security Terms	19-20
19-5	Computer Security, Security Levels, and the Hierarchical Classification System	19-22
19-6	Requirements for Computer Security in a FIP Requirement and in the Acquisition Documentation	19-24
19-7	Security and Privacy as an Operational Requirement	19-29
19-8	Example of Technical Hazards	19-30

CHAPTER 20		
PLANNING AND BUDGETING FOR FIP RESOURCE ACQUISITIONS		
SECTION	TITLE	PAGE
20.1	Key Statutes Affecting Planning for FIP Resources Acquisition	20-7
20.2	Impact of OMB Circular A-11 on FIP Planning and Budgeting	20-9
20.3	Key Regulations Affecting Planning for FIP Resources Acquisition	20-11
20.4	Types of FIP Resources Planning	20-13
20.5	Strategic Plans	20-15
20.6	FIP Resources Budget Procedures	20-17
20.7	Acquisition Plans	20-23

CHAPTER 21		
THE PURPOSES OF A FIP RESOURCES REQUIREMENTS ANALYSIS		
SECTION	TITLE	PAGE
21.1	Purpose of a FIP Resource Requirements Analysis	21-5
21.2	Effect of Key Statutes on the Requirement Analysis	21-9
21.3	Roles of the FIP Resource Acquisition Team	21-11
21.4	Contributions of the Contracting Officer in an Oversight Capacity	21-13

CHAPTER 22		
CONTENTS OF A REQUIREMENTS ANALYSIS		
SECTION	TITLE	PAGE
22.1	Fundamental Principles	22-5
22.2	Identify mandatory factors to consider when determining information resources requirements	22-8
22.3	Identify nonmandatory factors to consider when determining information resources requirements	22-27

CHAPTER 23		
DETERMINING THE SCOPE OF COMPETITION FOR FIP RESOURCES		
SECTION	TITLE	PAGE
23.1	Factors in Determining and Justifying a Requirement for Other Than Full and Open Competition	23-4
23.2	Acceptable Situations for a Compatibility-Limited Requirement	23-10
23.3	Acceptable Situations for a Specific Make and Model Requirement	23-11

CHAPTER 24		
ANALYSIS OF A REQUIREMENTS ANALYSIS		
SECTION	TITLE	PAGE
24.1	Key Factors for a Successful Requirements Analysis	24-5
24.2	Analytical Process: Critiquing the Requirements Analysis	24-9
24.3	Step 1: Determine Agency-Unique Requirements	24-10
24.4	Step 2: Determine if a Requirements Analysis Should be Submitted	24-11
24.5	Step 3: Review the Requirements Analysis	24-13
24.6	Step 4: Advise the Requesting Activity of the Need for Revision or Expansion	24-24
24.7	An Example of a Requirements Analysis for Review	24-25

CHAPTER 25		
DETERMINING IF CONVERSION STUDIES ARE NECESSARY		
SECTION	TITLE	PAGE
25.1	When Conversion Studies Are Required	25-5
25.2	Predicting Restrictiveness of a Requirement	25-9

CHAPTER 26		
THE PURPOSE AND CONTENT OF AN ANALYSIS OF ALTERNATIVES		
SECTION	TITLE	PAGE
26.1	Key Definitions	26-6
26.2	The Analysis of Alternatives and Its Relationship to the Requirements Analysis and the Acquisition Process	26-7
26.3	Required Alternatives to Consider in the Analysis of Alternatives	26-14
26.4	Other Alternatives to Consider in the Analysis of Alternatives	26-16
26.5	Content of the Analysis of Alternatives	26-18
26.6	Areas Unique to Software	26-20
26.7	How the Analysis of Alternatives Generates Improvements in the Specification	26-22
26.8	Summary: Determining the Best Source(s)	26-23

CHAPTER 27		
REVIEWING AN ANALYSIS OF ALTERNATIVES		
SECTION	TITLE	PAGE
27.1	How to Recognize an Analysis of Alternatives	27-4
27.2	Key Factors for a Successful Analysis of Alternatives	27-6
27.3	Overview of the Analytical Process: Critiquing the Analysis of Alternatives	27-8
27.4	How to Review an Analysis of Alternatives	27-11

CHAPTER 28		
BENEFIT-COST AND PRESENT VALUE ANALYSIS		
SECTION	TITLE	PAGE
28.1	Requirements for Benefit-Cost Analysis	28-5
28.2	Benefit-Cost and Cost Effectiveness Analysis	28-7
28.3	Overview: Benefit-Cost Analysis	28-9
28.4	The Factors of Time and Interest in Present Value Discounting	28-10
28.5	Analysis and Present Value Discounting	28-18
28.6	Steps in Benefit-Cost Analysis	28-20
28.7	Unique Terms Used in Benefit-Cost and Present Value Analysis	28-26

CHAPTER 29		
LEASE VS. PURCHASE OF FIP RESOURCES		
SECTION	TITLE	PAGE
29.1	Requirements for Lease-Purchase Analysis	29-4
29.2	Lease and Purchase Methods of Acquisition	29-10
29.3	Where to Obtain Pricing Information	29-15
29.4	Steps in Lease-Purchase Analysis	29-16
29.5	Contractor Leasing of ADPE	29-22

CHAPTER 30		
ANALYZING PRICING METHODS		
SECTION	TITLE	PAGE
30.1	Analyzing the Price-Related Factors	30-5

CHAPTER 31		
FUNDING FOR FIP RESOURCES		
SECTION	TITLE	PAGE
31.1	How Funding Rules Apply to Different Types of FIP Resources	31-4
31.2	How Lease and Purchase Methods Are Funded	31-11
31.3	The Role of the Information Technology Fund	31-16
31.4	When Multiyear Contracts Are in the Best Interest of the Government	31-17

CHAPTER 32		
ANALYZE SPECIFICATIONS FOR FIP RESOURCES ACQUISITION		
SECTION	TITLE	PAGE
32.1	Definitions of Specifications	32-5
32.2	Differences Among Types of Specifications	32-9
32.3	Documentation for Compatibility-Limited Requirements	32-11
32.4	Differences among a Specification, a Standard and a SOW	32-14

CHAPTER 33		
REVIEW STANDARDS FOR FIP RESOURCES ACQUISITION		
SECTION	TITLE	PAGE
33.1	Roles and Responsibilities Related to Standards	33-5
33.2	Seven Categories of FIP Standards	33-6
33.3	The Relevance of the Federal ADP and Telecommunications Standards Index	33-10
33.4	Conditions When FIP Standards Would Not Be Used	33-14

CHAPTER 34		
ANALYZE STATEMENTS OF WORK FOR FIP RESOURCES ACQUISITIONS		
SECTION	TITLE	PAGE
34.1	Purpose of a SOW	34-4
34.2	General Content of a SOW	34-5
34.3	Importance of a Well-Written Scope Statement	34-14

CHAPTER 35		
PREPARATION OF AN ACQUISITION PLAN		
SECTION	TITLE	PAGE
35.1	The Acquisition Plan: Overview	35-4
35.2	Developing the Acquisition Plan	35-7

CHAPTER 36		
SPECIAL AND PRICE-RELATED FACTORS FOR FIP RESOURCES		
SECTION	TITLE	PAGE
36.1	Special Factors to Consider in Developing a Strategy for FIP Resource Acquisition	36-7
36.2	Price-Related Factors to Consider in a FIP Resources Acquisition Plan	36-20

CHAPTER 37		
PREPARING AN AGENCY PROCUREMENT REQUIREMENT FOR A DELEGATION OF PROCUREMENT AUTHORITY		
SECTION	TITLE	PAGE
37.1	Background, Terminology, and Types of Delegations	37-4
37.2	Deciding if an Agency Procurement Request is Required	37-10
37.3	Preparing an Agency Procurement Request	37-12
37.4	GSA's Review and Delegation . . . And After	37-20

CHAPTER 38		
SOURCE SELECTION FOR FIP RESOURCES		
SECTION	TITLE	PAGE
38.1	Overview of Source Selection	38-4
38.2	Source Selection Methodologies	38-13
38.3	Unique Considerations for a FIP Resources Source Selection	38-20
38.4	Source Selection Plan	38-27

CHAPTER 39		
DEVELOPMENT OF A SOLICITATION FOR FIP RESOURCES		
SECTION	TITLE	PAGE
39.1	Differences in Developing a FIP Resources Acquisition Solicitation	39-5
39.2	Unique Areas Covered in a FIP Resources Acquisition	39-16
39.3	Requiring Offerors to Submit Financing Plans	39-18
39.4	Applying Standard Solicitation Documents to a FIP Resources Solicitation	39-19
39.5	Solicitation Checklist for FIP Resources	39-20

CHAPTER 40		
PROCESSING PROPOSALS FOR FIP RESOURCES		
SECTION	TITLE	PAGE
40.1	Distinguishing Potential Areas for Discussion	40-4
40.2	Reviewing Proposals for Commercial Terms and Conditions	40-7
40.3	The Need to Sanitize Technical and Cost Proposals	40-10
40.4	Safeguarding of Proposals	40-12

CHAPTER 41		
TECHNICAL EVALUATION FOR FIP RESOURCES		
SECTION	TITLE	PAGE
41.1	Technical Evaluation Overview	41-4
41.2	Mandatory, Evaluated and Subjective Technical Factors	41-12

CHAPTER 42		
ESTABLISHING PRICE OBJECTIVES IN A FIP RESOURCES ACQUISITION		
SECTION	TITLE	PAGE
42.1	Evaluating Price Proposals	42-4
42.2	Comparing Price Proposals	42-12
42.3	Construct a Prenegotiation Memorandum	42-18

CHAPTER 43		
RECOMMENDATION OF A WINNING FIP PROPOSAL		
SECTION	TITLE	PAGE
43.1	Analyzing and Evaluating Responses to Solicitations	43-4

CHAPTER 44		
PROTEST ISSUES IN FIP RESOURCE ACQUISITIONS		
SECTION	TITLE	PAGE
44.1	Options Available to the Protestor	44-5
44.2	Protest to the Agency	44-8
44.3	Protest to the GSBCA	44-9
44.4	Key Precedents and Decisions of the GSBCA	44-14
44.5	Protest to the GAO	44-15

CHAPTER 45		
FIP POST-AWARD CONSIDERATIONS		
SECTION	TITLE	PAGE
45.1	Contract Monitoring Procedures for FIP Resources	45-5
45.2	Contract Monitoring Procedures Unique to FIP Resources	45-12
45.3	Performance Monitoring for Telecommunications	45-15
45.4	Unique Requirements for FIP Resource Contract Modifications	45-18

PREFACE

THE FEDERAL ACQUISITION INSTITUTE (FAI) CURRICULUM

The Courses

In FY91, the FAI began providing Federal acquisition trainers and educators with instructional materials for a new Contract Management curriculum. This curriculum includes the following courses, listed in a recommended order of attendance.

1. Introduction to Contracting*
2. Procurement Planning*
3. Simplified Acquisitions
4. Contracting By Sealed Bidding*
5. Price Analysis*
6. Contracting By Negotiation*
7. Cost Analysis*
8. Negotiation Techniques
9. Government Contract Administration*
10. Government Contract Law
11. Types of Government Contracts
12. Source Selection*
13. Advanced Procurement Management
14. Intermediate Contract Pricing
15. Advanced Contract Administration
16. Termination

Specialized Courses

(in alphabetical order)

1. Acquisition of Federal Information Processing (FIP) Resources*
2. Contracting for Architect/Engineer Services*
3. Construction Contracting*

Offerors

Each of the above courses will be offered by the General Services Administration Interagency Training Center. Other Federal acquisition trainers and educators may incorporate FAI instructional materials in their respective curricula (generally under different course titles than the above). For instance, ALMC will be offering this course as a part of the Defense Acquisition University curriculum listed as CON 241.

* Currently available.

PURPOSE OF THE FEDERAL ACQUISITION INSTITUTE CURRICULUM

To Help You Accomplish The Goals Of The Federal Acquisition Process:

As a Contract Specialist, your primary goals are to:

1. Obtain the optimum market response to requirements for supplies and services, in terms of:

- Quality
- Timeliness
- Price

While—

- Accomplishing socioeconomic objectives
- Minimizing business and technical risks
- Maximizing competition
- Maintaining integrity.

2. Assure that purchased supplies and services are:

- Delivered or performed when and where specified in the contract
- Acceptable, in terms of conforming to the contract's specifications or statement of work
- Promptly and properly reimbursed
- Provided in compliance with other terms and conditions of the contract.

To Help You Perform Your Duties

To accomplish these goals, Contract Specialists perform more than 78 principal duties. Collectively, these duties constitute the Federal acquisition process. *Exhibit P-1* maps the acquisition process and relates each duty to the overall process. The FAI curriculum has been designed to systematically develop your skill at every duty in *Exhibit P-1*, in the context of accomplishing the overall goals of the Federal Acquisition Process.

Your Challenge

Your challenge is to become proficient in performing the duties described *Exhibit P-1*. Granted, you may presently perform only a subset of the duties. In terms of your career, however, learning the entire range of duties will improve your competitiveness for a great variety of contracting positions, including managerial positions. From the standpoint of the Government, you will be better able to perform any one duty if you have first hand knowledge of how the duty affects, and is in turn affected by, the performance of the other duties.

PRESOLICITATION PHASE

Determination of Need	Initiating the Procurement	Analysis of Requirement	Sourcing
Determining Needs 1. Forecasting Requirements 2. Acquisition Planning	Processing the PR 3. Purchase Requests 4. Funding Market Research 5. Market Research	Analyzing Requirements 6. Specifications 7. Statements of Work 8. Services	Extent of Competition 9. Sources 10. Set-Asides 11. 8(a) Procurements 12. Competition Requirements 13. Unsolicited Proposals Selection Factors 14. Lease vs. Purchase 15. Price Related Factors 16. Evaluation Factors Method and Plan for the Procurement 17. Method of Procurement 18. Procurement Planning

SOLICITATION-AWARD PHASE

Solicitation	Evaluation—Sealed Bidding	Evaluation—Negotiation	Award
Terms and Conditions 19. Contract Types 20. Letter Contracts 21. Contract Financing 22. Use of Government Property and Supply Sources 23. Need For Bonds 24. Solicitation Preparation Soliciting Offers 25. Publicizing Proposed Procurements 26. Preaward Inquiries 27. Prebid/Preproposal Conferences 28. Amending Solicitations 29. Cancelling Solicitations	Bid Evaluation 30. Processing Bids 31. Bid Acceptance Periods 32. Late Offers 33. Bid Prices 34. Responsiveness	Proposal Evaluation 35. Processing Proposals 36. Technical Evaluation 37. Price Objectives 38. Cost and Pricing Data 39. Audits 40. Cost Analysis 41. Evaluating Other Terms and Conditions 42. Competitive Range Discussions 43. Factfinding 44. Negotiation Strategy 45. Conducting Negotiations	Selection for Award 46. Mistakes in Offers 47. Responsibility 48. Subcontracting Requirements 49. Preparing Awards Executing Awards 50. Award 51. Debriefing Protests 52. Protests Fraud and Exclusion 53. Fraud and Exclusion

Exhibit P-1

POST-AWARD ADMINISTRATION PHASE

Start-Up	Quality Assurance	Payment and Accounting	Closeout
Planning 54. Contract Administration Planning 55. Post-Award Orientations Ordering 56. Ordering Against Contracts and Agreements Subcontracting 57. Consent to Subcontracts	Monitoring and Problem Solving 58. Monitoring, Inspection, and Acceptance 59. Delays 60. Stop Work 61. Remedies Property 62. Property Administration Reporting Performance Problems 63. Reporting Performance Problems	Payment 64. Limitation of Costs 65. Payment 66. Unallowable Costs 67. Assignment of Claims 68. Collecting Contractor Debts 69. Progress Payments 70. Price and Fee Adjustments Accounting 71. Accounting and Cost Estimating Systems 72. Cost Accounting Standards 73. Defective Pricing	Closeout 74. Closeout

POST-AWARD ADMINISTRATION PHASE (cont.)

Contract Modification	Termination	Claims	
Modifications/Options 75. Contract Modifications	Termination 76. Termination 77. Bonds	Claims 78. Claims	

CHARACTERISTICS OF FAI COURSES

- Each course in the curriculum builds on the skills and knowledge taught in prior courses.
- Each course covers specific duties and is designed to provide skill in performing those duties.
- Generally, there is a separate lesson for each duty, with a corresponding chapter in the Desk Reference.
- In most cases, your instructor will introduce the duty, its purpose (learning objective), applicable policies, and standards for performance.
- Next, the instructor will walk you through a flowchart of the steps in performing the duty.
- You will perform selected steps in-class, using case studies and other such exercises.
- You will be tested.
- For each duty, the Desk Reference serves as a reference, with flowcharts, steps in performance, and job aids.
- Practicums (i.e., self-instructional exercises) will be available at a later date to reinforce the in-class learning back on-the-job.
- Specialized courses (e.g., The Acquisition of FIP Resources, and Construction Contracting) do not reteach the basic acquisition process, but rather concentrate on the unique regulations and procedures related to acquiring that type of deliverable.

Length

Two weeks (10 days)

Who Should Attend

Contract Specialists (GS-9 to GS-13) who have completed the following courses (or an equivalent course or courses):

- Introduction to Contracting
- Procurement Planning
- Contracting by Negotiation
- Price Analysis
- Cost Analysis
- Government Contract Administration
- Source Selection

OVERVIEW OF ACQUISITION OF FEDERAL INFORMATION PROCESSING RESOURCES

Duties.

The following are among the primary duties from the Contract Specialist Workbook covered in this course:

<i>Unit of Instruction</i>	<i>Duty</i>	<i>Chapter(s)</i>	<i>Focus:</i>
79	Overview	1	Statutes
79	Overview	2	OMB Circulars
79	Overview	3	Policies
79	Overview	4	Ethics
1	Forecasting Requirement	5	System Life Cycle
5	Market Research	6	Definitions of Terms
8 & 81	Services, Types of FIP Resources	7	FIP Services
8 & 81	Services, Types of FIP Resources	8	FIP Support Services
8 & 81	Services, Types of FIP Resources	9	FIP Maintenance Services
81	Types of FIP Resources	10	FIP Equipment
81	Types of FIP Resources	11	Intellectual Property
81	Types of FIP Resources	12	FIP Software
81	Types of FIP Resources	13	Telecommunications Laws
81	Types of FIP Resources	14	Telecommunications
5	Market Research	15	FIRMR Applicability
5	Market Research	16	Market Research
5	Market Research	17	Current Trends
5	Market Research	18	Obsolescence
6	Specifications	19	Computer Security
1	Forecasting Requirements	20	Planning and Budgeting
1	Forecasting Requirements	21	Requirements Analysis
1	Forecasting Requirements	22	Requirements Analysis
1 & 12	Forecasting Requirements, Competition Requirements	23	Scope of Competition

1	Forecasting Requirements	24	Requirements Analysis
1	Forecasting Requirements	25	Conversion Studies
1	Forecasting Requirements	26	Analysis of Alternatives
1 & 9	Forecasting Requirements, Sources	27	Analysis of Alternatives
1	Forecasting Requirements	28	Benefit-Cost Analysis
1	Forecasting Requirements	29	Lease vs. Purchase
1	Forecasting Requirements	30	Analyzing Pricing Methods
4	Funding	31	Funding of FIP Resources
6	Specifications	32	Specifications
6	Specifications	33	Reviewing Standards
7	Statements of Work	34	SOW
18	Procurement Planning	35	Acquisition Plan
15	Price-Related Factors	36	Special and Price-Related Factors
80	APRs	37	Agency Procurement Requests
16	Evaluation Factors	38	Source Selection
24	Solicitation Preparation	39	Developing a Solicitation
35	Processing Proposals	40	Processing Proposals
36	Technical Evaluation	41	Source Selection
37	Price Objectives	42	Price Objectives
50	Award	43	Recommending Winning Proposals
52	Protests	44	Protest Issues
55	Post Award Orientations	45	Post-Award Considerations

*Units 79, 80, and 81 are specialized units of instruction for FIP resources.

USING THE TEXT / REFERENCE IN THE CLASSROOM

Classroom Learning Objectives (CLOs)

At the beginning of each chapter, we have listed the classroom learning objectives for that chapter. We have written the Desk Reference to provide you with the information necessary to accomplish those objectives. Likewise, the classroom instruction and exercises are designed to help you attain those objectives.

Most of the objectives are written in terms of your performance of a duty or task. For example, The Desk Reference provides a step by step guide to performing the duties. In the classroom, you will have opportunities to practice performance of the duties—using the Desk Reference as your guide—through the use of such instructional techniques as interactive viewgraphs and case studies.

Interactive Viewgraphs

An interactive viewgraph is a slide on the overhead projector that requires a response from the class. For example, if the instructor is showing a decision table, the “then” side would be empty and you would help fill in the answers. Or perhaps the slide asks a particular question about a list of conditions shown on the slide. Most viewgraphs are represented in the Desk Reference as Exhibits.

Macro Exercise

The Macro Exercise is written as related scenarios or stories about a hypothetical acquisition. There are several questions that follow the scenarios relating to the case and the particular lesson. Sometimes you have to use information in the Desk Reference to complete a case study.

Reading Assignments

You are responsible for assigned readings from the chapters. You will spend minimal time listening to lectures. Our philosophy is that you learn best by doing the tasks under simulated conditions.

Testing

There will be two written tests. They will be administered on the last class day of each week. Test items are taken only from the readings assigned by your Instructor.

The test should take no more than 120 minutes. All test questions were developed to verify the learning acquired from the course learning objectives which appear on the first page of each chapter in the Desk Reference.

USING THE EXERCISE BOOK IN CLASS

The practical exercises in this course are intended to provide experience in the types of actions the student will encounter during the acquisition of Federal Information Processing resources. Instead of "stand alone", unrelated exercises, each practical exercise is part of a larger "Macro" exercise, and related to the practical exercises that precede or follow that exercise. A decision reached in one exercise can affect the decision that should be made in following exercises. Therefore, deleting several exercises can have the effect of disrupting the flow and performance of the macro exercise.

It is important to provide the optimum amount of practice in solving the practical exercise requirements. This requires that the instructor avoid too much lecture and allow time for students to work in groups to discuss and solve the requirements and to present solutions. In order to facilitate group cooperation on the practical exercises, the instructor should encourage the students to form small teams of several students each, with their desks arranged to facilitate small face-to-face working teams.

As each group presents the solution to a practical exercise, the students should focus on those aspects of FIP resource acquisition that vary or differ from other acquisitions. If there is not enough time to fully cover a practical exercise in class, the students should still be encouraged to read that exercise independently.

The large number of documents and actions in a FIP acquisition can be confusing. It is easy for the student to forget at which point in the life cycle process a certain action or document becomes important. Therefore, in order to provide the overall framework and remind the student where he/she is in the overall process, it is useful for the instructor to frequently remind the class where in the life cycle process a particular event or document occurs.

Most of the lessons in this course concern actions and events that occur in the Planning and Acquisition Phases of the Acquisition Life Cycle. The lessons and desk reference chapters are covered in the sequence in which they generally occur in an acquisition. However, several chapters concern preliminary information, such as ethics, which the student should know before initiating any acquisition action.

USING THE DESK REFERENCE AT YOUR JOB SITE

The Desk Reference was developed to be used at your job site as well as in the classroom. Its step by step approach, FAR, FIRMR and DFARS references, structured writing, and index are all designed for the easy and quick retrieval of information about the contracting process. Each Desk Reference is "dated" by indicating which FAC of the FAR system it is current through. This lets you know exactly how up to date it is. You may contact the FAI for updates or annotate your own copy as FAR policy changes.

COMMENTS

The book has not yet been written that does not contain some typos, incorrect citations, missing information, or technical inaccuracies. If this book is helpful to you, and you would like to help make it better, please send any corrections you recommend to the Federal Acquisition Institute (FAI) in care of GSA-VF, 18th and F Sts., NW, Washington, DC, 20405.

ABOUT THE FAI

As directed by the Office of Federal Procurement Policy Act, as amended, the Federal Acquisition Institute (FAI) has been working for more than a decade to (1) foster Government-wide career management programs for a professional procurement work force; and (2) promote and coordinate Government-wide research and studies to improve the procurement process and the laws, policies, methods, regulations, procedures, and forms relating to procurement by the executive agencies.

For example, the FAI over the years has:

- Published annual demographic reports on the Federal acquisition workforce, showing trends in qualifications, turnover, and hiring.
- Developed and published guidance for the consideration of Federal Procurement Executives in establishing the procurement career management programs required by the Office of Federal Procurement Policy Act, as amended.
- Assisted colleges and universities in establishing courses and programs in acquisition disciplines, published directories of such academic courses and programs, and reviewed the equivalency of those courses and programs in meeting Federal training requirements.
- Supported the Office of Personnel Management (OPM) in developing standards and examinations for acquisition positions.
- Assisted Federal managers and supervisors in identifying and recruiting highly qualified candidates for acquisition fields (e.g., by publishing recruiting brochures, preparing other recruitment materials, coordinating recruitment at selected colleges).
- Developed a Contract Specialist Workbook, as a desk reference for performing 78 core Contract Management duties.
- Developed instructional materials (including this and other Desk References, instructor guides, and test/banks) for Contract Management courses.
- Assisted agencies in establishing competency-based training, education, and certification programs.
- Developed and field tested a staffing standards model for contracting activities.

ABOUT THE ARMY LOGISTICS MANAGEMENT COLLEGE

This book was written in cooperation with the Army Logistics Management College (ALMC). Therefore, you will find references to FAR, FIRMR, and DFARS.

The Army Logistics Management College, ALMC, was established in 1954 with a single mission to conduct a 12-week Army Supply Management Course. Today it is a multi-discipline institution that graduates over 55,000 students annually.

The college is a leader in education and training technologies for acquisition, logistics, and related managerial and analytical subjects with the goal of consistently meeting the training and education needs of the entire defense establishment at the basic intermediate, and senior levels of the work force.

ALMC is the largest school in the Defense Acquisition University consortium and a member of the DoD Environmental Training School System. The Defense Logistics Studies Information Exchange, the official DoD repository for logistics studies, models, and related documentation, is also operated by ALMC.

ALMC's vision: The defense leader in education, dedicated to increasing the readiness of the force through competence, commitment, curriculum, and change.

ABOUT THE GSA INTERAGENCY TRAINING CENTER

The U.S. General Services Administration (GSA) was founded to serve other Federal agencies, State and local governments, and the public. An important part of this service is helping governmental groups to fulfill their missions. The GSA Interagency Training Center supports other agencies' missions by providing quality training to their employees. For Federal acquisition specialists, the Interagency Training Center provides courses in the knowledge, skills, and abilities necessary to perform their duties.

To find the GSA Interagency Training Center courses most useful to your mission, consult *The GSA Interagency Catalog and Schedule*, which is published annually. For copies, contact the GSA Interagency Training Center by phone or letter at:

**GSA Interagency Training Center
P.O. Box 15608
Arlington VA 22215-0608
FTS 703 557-0986**

CHAPTER 1

STATUTES THAT APPLY TO THE ACQUISITION OF FIP RESOURCES

Chapter Vignette

Mark had more than five years of experience in acquisition. This included numerous small purchases under \$25,000 and some “best value” acquisitions. The largest acquisition he had ever worked on was for more than \$400,000. He had also attended training at the Federal Acquisition Institute and at the Army Logistics Management College. In all, he felt reasonably confident that he could handle most acquisition actions. However, his confidence was a bit shaken when he learned from Marcia that he would be involved in the large scale acquisition of a new class of computers for the Government, at an expected value of more than a half billion dollars. He had never acquired FIP resources before. He was soon to learn that the acquisition of computers and other federal information processing resources can be quite different from other acquisitions in a number of ways.

“Before you get into the technical and cost details,” Marcia said, “you had better read up on the statutes that apply to FIP resources acquisitions.”

Course Learning Objectives

At the end of this chapter, you will be able to:

Overall:

Determine provisions of statutes that uniquely apply to (or have unusual impact on) the acquisition of FIP resources.

Individual:

- 1.1 Explain how the FIP acquisition process is affected by statutes, regulations, and policies.
- 1.2 Distinguish how FIP acquisitions differ from other types of federal acquisitions.
- 1.3 Explain the impact of key statutes on the acquisition of FIP resources.

Chapter Overview

Scope

This chapter presents an overview of statutes (laws) that apply to the acquisition of Federal Information Processing (FIP) resources. You will see that acquisition of FIP resources resembles procurement of other commodities in some ways, but there are some major differences.

FIP resources are broadly defined as any equipment or interconnected system or subsystem used to acquire, store, manipulate, transmit, or receive data or information electronically. This includes all hardware, software and related services or supplies. The definition of federal information processing (FIP) resources includes the following five categories:

1. FIP equipment
2. FIP software
3. FIP services (processing and telecommunications-related services)
4. FIP support services (includes FIP maintenance)
5. FIP related supplies

These categories of FIP resources—which we will be studying in Chapters 6 and 15—are defined in the FIRMR. For now, it's important for you to understand that:

- The term “FIP resources” is very broad and includes many types of computer and telecommunications-related equipment, systems, and services
- The definitions of “automatic data processing equipment” and “FIP resources” have changed over time with changes in law, regulation, and case history
- All resources determined to be “FIP resources” are governed by special laws, policies, regulations, and procedures discussed in this course.

After you complete this chapter, you will be able to identify the major statutes for an acquisition of FIP resources.

(continued on next page)

Chapter Overview

References

In order to thoroughly understand the principles and procedures described in this chapter, you should refer to the following:

FIRMR	201-4.001	FAR	6.3
	201.20.103-6		24.104
	201-20.102		52.224-1 & 2
	201-39.201		
	201-39.1001		
	201-39.5205-5	DFARS	239.001-70

Topics Covered in this Chapter

This chapter includes a discussion of the major statutes which uniquely apply to, or have impact on, the acquisition of FIP resources. These statutes are also the key references that you must understand in order to meet the objectives in this chapter.

The major topics in this chapter are:

SECTION	TITLE	PAGE
1.1	How the Federal Information Processing Resources Acquisition Process Is Affected by Statutes, Regulations and Policies	1-5
1.2	How FIP Acquisitions Differ from Other Types of Federal Acquisitions	1-7
1.3	Impact of Key Statutes on Acquisition of FIP Resources	1-9

1.1 How the Federal Information Processing Resources Acquisition Process is Affected by Statutes, Regulations and Policies

Background

Acquisition of FIP resources takes place within a framework of statutes, policies and regulations. Laws are the most important part of the framework, establishing the basis for policies, regulations, and even contracting procedures.

For example, laws determine:

- Who has authority to acquire FIP resources
- How agencies are organized to acquire and manage resources
- How FIP resources will be procured in terms of competition
- To whom vendors can complain if they feel they have been treated unfairly

Many state and local governments and other countries' governments pattern their acquisition of FIP resources after the guidelines established by the U.S. Government. So you can see that the federal policies and practices have an enormous impact on information systems acquisitions worldwide.

Our FIP acquisition process is a rational and orderly system based on several key statutes. These statutes are important, because they are the legal basis for the acquisition of FIP resources. These laws are implemented by various Government agencies with regulations and policies built on the law.

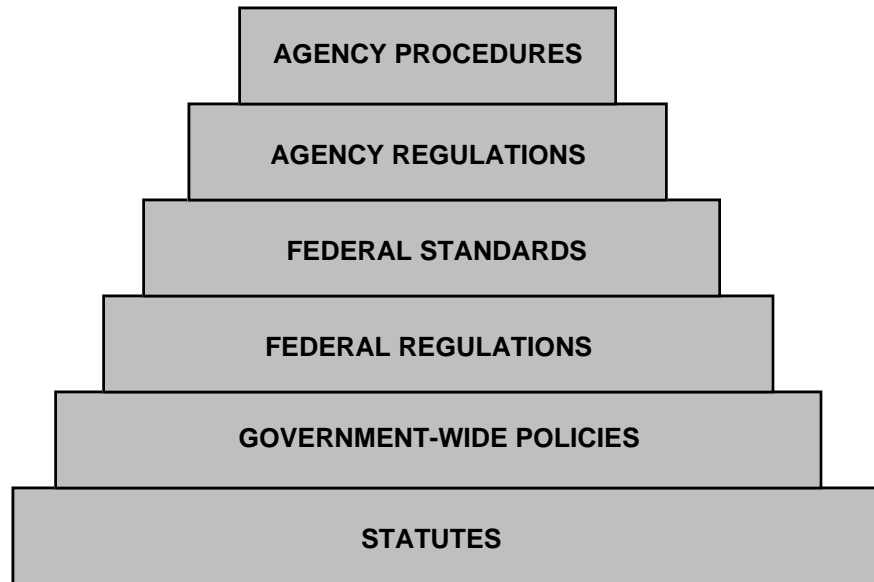
Understanding the framework for acquisition begins with understanding laws. This chapter explains various key statutes. Later chapters will explain various supporting regulations and policies designed to carry out the intent of these laws.

(Topic continued on next page)

1.1 How the Federal Information Processing Resources Acquisition Process is Affected by Statutes, Regulations and Policies

Background
(continued)

Federal statutes are the ultimate basis for the policies, regulations, standards and procedures in the Government.



1.2 How FIP Acquisitions Differ From Other Types of Federal Acquisitions

Similarities

You will see that acquisition of FIP resources is similar in many ways to the acquisition of other commodities. For example, the Government attempts to ensure full and open competition, and to obtain the maximum number of offers.

Whether you acquire pencils and paper or computers, you will be guided by the provisions of the Federal Acquisition Regulation (FAR). The general procedures you will follow for conducting and documenting the acquisition, such as source selection and use of the Uniform Contract Format (UCF), are similar to those you would use for any other acquisition.

Differences

FIRMR 201-39.102

There are also significant differences between acquiring pencils and paper or computers. For example, Congress authorized GSA to oversee acquisition of FIP resources and to establish a special regulation, called the *Federal Information Resources Management Regulation*—or “FIRMR.” So while the FAR applies to FIP resources *generally*, the FIRMR applies *specifically* and takes precedence over the FAR.

This means that the rules of the FIRMR provide more detail about FIP acquisition. And if there is a conflict between the FIRMR and the FAR, the FIRMR will require its use over the FAR. When that happens, you will follow the rules of the FIRMR, *not* the FAR.

There are other differences which are based in law, including:

- Centralized Government-wide authority vested in GSA for acquisition of FIP resources
- GSA’s implementation of that authority through delegations of procurement authority (DPA)
- A body of circulars, bulletins, and regulations, such as the FIRMR and OMB Circulars, issued by authorized agencies to implement statutes and govern FIP resource acquisition

(Topic continued on next page)

1.2 How FIP Acquisitions Differ From Other Types of Federal Acquisitions *(continued)*

Differences
(continued)

-
- Establishment of mandatory and optional federal standards for FIP resources to ensure that FIP resources can work together
 - Establishment of a special protest forum in GSA called the General Services Board of Contract Appeals (GSBCA)
 - Centralized authority in senior management officials in agencies—called Designated Senior Officials (DSOs)—to oversee FIP resources and information activities

By passing laws, Congress has affected how agencies are organized to acquire FIP resources and the rules that are used.

1.3 Impact of Key Statutes on Acquisition of FIP Resources

Introduction

This section discusses important statutes which uniquely apply to, or have an unusual impact on, the acquisition of FIP resources.

You should read through each of the following summaries so that you know how these laws affect FIP resources acquisition.

For convenience, the following table summarizes statutes which affect FIP resources acquisitions, in chronological order. The text following the table explains each of these statutes in greater detail.

KEY STATUTES AFFECTING FIP RESOURCES ACQUISITION	
<u>Statute:</u>	<u>Year:</u>
The Most Significant Statutes:	
• Federal Property and Administrative Services Act	1949
• Brooks Act	1965
• Privacy Act	1974
• Paperwork Reduction Act	1980
• 1982 DoD Authorizations Act (Warner Amendment)	1982
• Competition in Contracting Act	1984
• Small Business and Federal Procurement Competition Enhancement Act	1984
• Paperwork Reduction Reauthorization Act	1986
• Office of Federal Procurement Policy Act (1974)	1988 (amend.)
Other Significant Statutes	
• Crimes and Criminal Procedures Act	1948
• Copyright Act	1980
• Defense Acquisition Improvement Act	1986
• Computer Security Act	1987

(continued on next page)

1.3 Impact of Key Statutes on Acquisition of FIP Resources *(continued)*

Federal Property
and Administrative
Services Act of
1949

The first statute you must understand is the *Federal Property and Administrative Services Act of 1949*.

This Act created GSA:

to provide for the Government an economic and efficient system for...the procurement and supply of personal property and nonpersonal services, including related functions such as contracting...

Originally, this statute was intended to apply to the acquisition of most supplies and services by civilian (non defense) agencies, and NOT specifically to the acquisition of FIP resources. However, many of the early FIP resource acquisitions were made under the provisions of this Act.

When applied to the acquisition of FIP resources, this statute and implementing guidance were *very restrictive* and made it rather difficult to acquire FIP resources. Usually, FIP resources procured (such as ENIAC, the first electronic computer) were very specialized, large, expensive and developed to Government-approved specifications. *This had the effect of severely limiting competition.*

By the early sixties, Government studies indicated that special statutes might be needed to govern the acquisition and use of FIP resources. This soon led to the passage of key statutes, such as the *Brooks Act of 1965*.

Brooks Act
(1965)

The *Brooks Act of 1965* (Pub. L. 89-306) governs the acquisition and use of information technology in the federal government. This act, named after its sponsor, Congressman Jack Brooks of Texas, was passed largely because Congress had become concerned that agencies' computer acquisition practices had resulted in the dominance of a single vendor in the federal government's computer inventory. By now more manufacturers of computers existed. Congress believed that dominance:

- Was caused by noncompetitive practices
- Was permitted by a lack of oversight over computer procurements
- Resulted in the expenditure of more money than required to meet agencies' needs

Therefore, the *Brooks Act* amended the *Federal Property and Administrative Services Act* to centralize computer acquisition authority and establish oversight responsibility in particular agencies, especially the General Services Administration (GSA). The Act provides that:

The Administrator [of GSA] is authorized and directed to coordinate and provide for the economic and efficient purchase, lease, and maintenance of automatic data processing equipment by federal agencies.

(Topic continued on next page)

1.3 Impact of Key Statutes on Acquisition of FIP Resources *(continued)*

Brooks Act
(1965)
(continued)

In this act, the term “automatic data processing equipment” (ADPE) was used instead of “FIP resources.” Also note two other points:

1. GSA had exclusive acquisition authority over all agencies
2. The term “automatic data processing equipment” was *not defined in law*, but in regulations based on the legislative history of the *Brooks Act*

The key features of the *Brooks Act* are:

- It delegated to GSA exclusive authority for providing ADPE (including maintenance and repair) to federal agencies. This means only GSA could acquire ADPE.
- It authorized GSA to implement this authority by delegating procurement authority back to the agencies. This means agencies could acquire ADPE if GSA delegated authority.
- It provided for sharing, selling and exchange of ADPE within the federal government.
- It provided for an ADP “revolving fund” managed by GSA, which made funds for ADPE available *without fiscal year limitation (multi-year finding)*.
- It authorized the Department of Commerce to provide the GSA and federal agencies with scientific and technological support and to recommend uniform ADP standards. Commerce’s National Institute of Standards and Technology (NIST) issues *Federal Information Processing Standards* (FIPS), sometimes called FIPS PUBS.
- It charged the Office of Management and Budget (OMB) with the responsibility for fiscal control and development of administrative and management policy. OMB does this through circulars, such as OMB Circular A-130, *Management of Federal Information Resources*.
- It also gave OMB the authority to decide disputes between GSA and other federal agencies.
- It emphasizes that agencies have the right to determine their ADP requirements and stipulates that GSA shall not “impair or interfere with the determination by agencies of their individual automatic data processing equipment requirements, including the development of specifications for and the *selection of the types and configurations of equipment needed*.” [Emphasis added.]

OMB Circ. A-130

(continued on next page)

1.3 Impact of Key Statutes on Acquisition of FIP Resources *(continued)*

Privacy Act (1974)

The *Privacy Act of 1974* (Pub. L. 93-579) is also of great concern to FIP resources acquisition. By 1974, Congress was concerned that modern computer systems in the federal government could store huge amounts of personal data on private individuals, and that this information might be abused. Congress found that:

...the increasing use of computers and sophisticated information technology, while essential to the efficient operations of the Government, has greatly magnified the harm to individual privacy that can occur from any collection, maintenance, use, or dissemination of personal information...

This law established some specific guidelines for the types of information that Government agencies are allowed to obtain and maintain in computer files. It also established criteria to follow regarding release of information in order to ensure confidentiality of information concerning private citizens.

The Privacy Act requires that federal agencies and employees:

- Take necessary action to reasonably ensure the data is accurate
- Maintain the confidentiality of data covered by the Act

Civil and Criminal Penalties. The Act also established criminal and civil penalties for failure to comply. This law also applies to a contractor doing work for the Government, if he or she has access to data covered by the Act.

OMB Circ. A-130 FAR 24.104, 52.224-1 & -2 FIRMR 201-20.103-6 201-39.1001 201-39.5205-5
--

Further guidelines on privacy requirements are in OMB Circular A-130, the FAR, and the FIRMR. The FIRMR requires that privacy needs be identified during requirements analysis. Both the FAR and FIRMR provide guidance and standard clauses for inclusion in solicitations.

1.3 Impact of Key Statutes on Acquisition of FIP Resources *(continued)*

Paperwork Reduction Act (1980)

The *Paperwork Reduction Act of 1980* (Pub. L. 96-511) was enacted by Congress to reduce the federal government’s paperwork burden on the public. The Act seeks to:

- Minimize the paperwork burden on individuals, small businesses, and state and local governments
- Minimize the cost to the Government of collecting, using and disseminating information
- Maximize the usefulness of the information collected by the Government

But this Act is about more than paperwork reduction. It also introduced the concept of “information management” into law. And, it addresses ADP and telecommunications acquisition and management by establishing its goal to:

ensure that automatic data processing and telecommunications technologies are acquired and used by the Federal Government in a manner which improves service delivery and program management, increases productivity, reduces waste and fraud, and, wherever practicable and appropriate, reduces the information processing burden for the Federal Government and for persons who provide information to the Federal Government.

There are several key features of the *Paperwork Reduction Act of 1980*. For example, it requires agencies to designate a senior official “or, in the case of military departments, and the Office of the Secretary of Defense, officials” who report to the agency head and are responsible and accountable for *Brooks Act* acquisitions. These officials are often referred to as “Designated Senior Officials”—or DSOs.

You may observe that the establishment of DSOs continues the concept of centralization of authority which began with the *Brooks Act*.

The Act also required the Office of Management and Budget (OMB) to:

- Provide advice on and develop and implement policies and guidelines for ADP, telecommunications, and information management functions and activities
 - Promote the use of ADP and telecommunications equipment to improve the effective use and dissemination of federal information
 - Consolidate the agencies’ information technology plans after consultation with GSA, if necessary, into a five-year plan to meet the ADP and telecommunications needs of the federal government
 - Submit the plan to Congress (except for DoD)
-

(continued on next page)

1.3 Impact of Key Statutes on Acquisition of FIP Resources *(continued)*

Warner
Amendment
(1982)

DFAR 239.001-70

Public Law 97-86, *DoD Authorization Act* (1982), commonly called the *Warner Amendment*, made the *Brooks Act* NOT applicable to certain DoD procurements of ADPE systems, components, and service.

Along with the *Brooks Act*, the *Warner Amendment* is the most important legislation you must learn and understand for acquiring ADPE or services, if you are in the Department of Defense.

By authority of the *Warner Amendment*, the *Brooks Act* does NOT apply when you are acquiring ADPE or services for:

- intelligence activities
- cryptological activities related to national security
- the command and control of military forces
- equipment that is an integral part of a weapon or weapon system
- an item critical to the direct fulfillment of military or intelligence missions, *excluding routine administrative and business applications such as payroll, finance, logistics, and personnel management applications.*

Neither GSA nor the GSBCA has jurisdiction over Warner Amendment procurements. However, Warner Amendment determinations have been protested and are subject to jurisdictional decisions by the GSBCA.

This means that if you decide that your procurement is exempt under the *Warner Amendment*, you do NOT have to get a delegation of procurement authority form GSA. (Most agencies have procedures for approval of Warner Amendment determinations.) But contractors can protest your decision and the GSBCA will decide if they agree with your *Warner Amendment* determination. If they disagree, they will hear the protest and you may have to get a DPA. Therefore, you must be careful with the determination and be sure to document it.

Note that the procurement of a DoD system, equipment, or service which is used for the processing of routine administrative and business applications still requires all necessary approvals subject to the *Brooks Act*.

Example—
Warner
Amendment

For example, If you were to determine whether a missile is subject to the *Brooks Act*, your first reaction might be “of course not.” However, consider that missiles are targeted and flown by computers and defense personnel are trained in missile operation and maintenance by computer-based training. Computers are subject to the *Brooks Act*. Yet, under the

(Topic continued on next page)

1.3 Impact of Key Statutes on Acquisition of FIP Resources *(continued)*

Example—
Warner
Amendment

Warner Amendment, computers which are an integral part of a weapon or weapon system are exempt from the Brooks Act. In this case, the missiles would fall under the Warner Amendment exemption yet, computer based training would come under the requirements of the Brooks Act.

Competition in
Contracting Act
(1984)

The *Competition in Contracting Act* (CICA) (Pub. L. 98-369) requires agencies to “obtain full and open competition through the use of competitive procedures” or combination of competitive procedures that is best suited under the circumstances of the procurement.

Understand that by law:

...the term ‘full and open competition,’ when used with respect to a procurement, means that all responsible sources are permitted to submit sealed bids or competitive proposals on the procurement.

This statute modified the *Federal Property and Administrative Services Act of 1949*, the *Armed Services Procurement Act of 1947*, and the *Office of Federal Procurement Policy Act*.

FAR 6.3

One of CICA’s primary changes is the establishment of seven exceptions to the use of full and open competition in acquisitions. These seven exceptions are included in FAR 6.3:

1. Only one responsible source and no other supplies or services will satisfy agency requirements
2. Unusual and compelling urgency
3. Industrial mobilization; or engineering, developmental or research capability
4. International agreement
5. Authorized or required by statute
6. National security
7. Public interest, as determined by the head of the agency

Other key features of CICA follow:

- It establishes when sealed bidding procedures are used in lieu of negotiated procurement procedures.
- It establishes three types of competition:
 - full and open competition
 - full and open competition after exclusion of sources
 - other than full and open competition.

(Other Key Features continued on next page)

1.3 Impact of Key Statutes on Acquisition of FIP Resources *(continued)*

Competition in
Contracting Act
(1984)
(continued)

- It limits the circumstances under which other than full and open competition can be used and sets specific justification requirements based on the seven exceptions to full and open competition.
 - It prohibits the use of other than competitive procedures due to lack of advance planning or loss of fiscal year funds.
 - It codifies requirements relating to planning and market research, publicizing procurements, solicitation, evaluation, cost and pricing data, and award. This means that requirements which used to be only in the regulations, are now also written in the law (codified).
 - It affects FIP resources acquisition directly by establishing on a trial basis a new protest forum—the GSBICA—*solely for use in protesting Brooks Act procurements*.
 - It codified requirements for an existing protest forum, the General Accounting Office (GAO).
 - It requires that each agency designate a competition advocate.
-

Small Business
and Federal
Procurement
Competition
Enhancement Act
(1984)

The *Small Business and Federal Procurement Competition Enhancement Act* (Pub. L. 98-577) amended the *Small Business Act*, the *Federal Property and Administrative Services Act*, and the *Office of Federal Procurement Policy Act*.

While preparing the proposed law, the Senate Small Business Committee expressed concern that federal contracting laws, regulations, and practices “make it difficult, if not impossible for many small businesses to fairly and fully compete for Government contracts.”

Congress enacted this law to increase opportunities for competitive awards by requiring agencies to plan for future competition and by “eliminating major obstacles to competition faced by small businesses wishing to furnish the Government components [including spare parts, support equipment, and services] needed to maintain major systems.” You will note that Congress was concerned that after a major system was awarded, all future business went noncompetitively to the awardee.

(Topic continued on next page)

1.3 Impact of Key Statutes on Acquisition of FIP Resources *(continued)*

Small Business
and Federal
Procurement
Competition
Enhancement Act
(1984)
(continued)

At about the time this law was passed, smaller computers (such as desk top microcomputers) began to improve rapidly in capability, especially for such common tasks as word processing, graphics, data bases and spreadsheets. Many ADP tasks that had previously been done on “dumb” terminals linked to an expensive mainframe could now be done on a small “smart” micro-computer at a far lower cost. A number of smaller manufacturers began to assemble microcomputers from components manufactured by others and sell them at a lower price.

The impact of this act was to promote competition, allowing even small assemblers and suppliers of FIP resources to pursue large computer acquisitions by the federal government.

Paperwork
Reduction
Reauthorization
Act (1986)

The *Paperwork Reduction Reauthorization Act of 1986* (Pub. L. 99-500) defined ADPE *in the law*, ending disputes that had persisted since passage of the *Brooks Act*.

This act (implemented by FIRMR 201.4001, 201-39.201, and Bulletin A-1) made the following important changes to the *Federal Property and Administrative Services Act*:

FIRMR
39.101-3
201-39.201 &
201-4.001
FIRMR Bulletin
A-1

1. Automatic data processing equipment (ADPE) was defined to encompass all ADP resources and most telecommunications resources. This change was made in recognition of the merging of telecommunications and ADP technologies. Only radar, sonar, radio, and television equipment were excluded from the definition of ADPE. To minimize confusion between the statutory definition of ADPE and the popular meaning of that term, GSA established the term “Federal information processing (FIP) resources” to replace the ADPE, as defined in Pub. L. 99-500.
2. GSA’s exclusive procurement and management authorities were expanded to federal contracts “making significant use” of ADPE.
3. ADPE acquired and used by a contractor that are “incidental to the performance” of Federal contracts were excluded from GSA’s authorities.

(Topic continued on next page)

1.3 Impact of Key Statutes on Acquisition of FIP Resources *(continued)*

Paperwork
Reduction
Reauthorization
Act (1986)
(continued)

Under this Act, ADPE includes:

- Computers
- Ancillary equipment
- Software, firmware, and similar products
- Services, including support services, and
- Related resources as defined by regulations issued by the Administrator of General Services [GSA calls these resources FIP resources]

Excepted from the definition of ADPE are:

- ADPE acquired by a federal contractor which is *incidental* to the performance of a federal contract
- Radar, sonar, radio or television equipment [NOTE: Check GSBCA decisions in this area.]
- ADPE or services procured by DoD, **IF** the function, operation, or use involves:
 - intelligence activities
 - cryptological activities related to national security
 - the command and control of military forces
 - equipment which is an integral part of a weapon or weapons system, or
 - equipment which is critical to the direct fulfillment of military or intelligence missions, *provided that this exclusion shall not include automatic data processing equipment used for routine administrative and business applications such as payroll, finance, logistics, and personnel management*
 - ADPE or services procured by the Central Intelligence Agency (CIA)

You will note that the statutory definition of ADPE includes the *Warner Amendment* exemptions. However, at this time Congress also confirmed GSA's authority over telecommunication, support services, and certain contractor acquisitions of ADPE.

(Topic continued on next page)

1.3 Impact of Key Statutes on Acquisition of FIP Resources *(continued)*

Paperwork
Reduction
Reauthorization
Act (1986)
(continued)

This Act also:

- Requires annual issuance of five-year management plans to meet the information technology needs of each agency and the federal government
- Combined the old ADP and telecommunications revolving funds into the multi-year Information Technology Fund (ITF).
- Defines “information resources management”
- Specifically authorizes OMB to consider an agency appeal when GSA has denied a request for a delegation of procurement authority
- Expanded the GSBCA role allowing it to determine what is ADPE (within the statutory definition) and gave GSBCA permanent jurisdiction over ADP protest resolution

Regarding this last point, since the GSBCA can interpret what is ADPE under the statute, you will understand fully the definition of ADPE only by researching the:

- Statutory definition
 - FIRMR definition
 - Explanation in FIRMR Bulletin A-1
 - Jurisdictional decisions of the GSBCA which interpret these definitions
-

(continued on next page)

1.3 Impact of Key Statutes on Acquisition of FIP Resources *(continued)*

Office of Federal
Procurement
Policy Act
(1974, amended
1988)

The *Office of Federal Procurement Policy Act* (Pub. L. 93-400) established the Office of Federal Procurement Policy (OFPP) in OMB as the central executive branch organization for “overall direction of procurement policies, regulations, procedures, and forms.” The law applies broadly to procurement, including procurement notices in the *Commerce Business Daily*, consultant conflicts of interest, procurement regulation procedures, and procurement data reporting.

Of special interest to acquisition staff are provisions in section 423, *Procurement Integrity*, of the *OFPP Act*, amended in 1988, that establish rules against certain prohibited activities by contractors and Government employees during contracting.

For example, this Act prohibits a federal employee from soliciting or discussing employment with a contractor during procurement process. It also bars the contractor from offering employment. Other prohibited actions include offering or accepting a gratuity (thing of value), or asking for, or passing on information which is proprietary or related to a source selection. It bars Government employees from engaging in any action during a procurement process which would affect his or her negotiations for future employment.

The Act also places certain restrictions on a former Government employee when representing a contractor before the Government on any contract action on which he or she worked while a member of the Government.

The Act requires that persons in the procurement process avoid any appearance of:

- Using public office for private gain
 - Giving preferential treatment
 - Impeding Government efficiency or economy
 - Losing independence or impartiality
 - Making Government decisions outside official channels
 - Adversely affecting the confidence of the public in the Government’s integrity
-

1.3 Impact of Key Statutes on Acquisition of FIP Resources *(continued)*

Other Significant Statutes

The key statutes that were previously discussed in this chapter are the most significant to FIP resources acquisitions. However, there are several other statutes which apply to FIP resources acquisitions, and you need be aware of these also:

- *Crimes and Criminal Procedure Act* (1948)
- *Copyright Act* (1980)
- *Defense Acquisition Improvement Act* (1986)
- *Computer Security Act* (1987)

Crimes and Criminal Procedures Act (1948)

The *Crimes and Criminal Procedures Act* (*Crimes and Criminal Procedure Act*, June 5, 1948, Chp 645, 62, stat. 791, section 1905) affects FIP resources acquisitions because it establishes specific penalties for the improper disclosure of trade secrets entrusted to Government agencies. It still applies to all proprietary information from FIP resources vendors.

This is especially important today, because computer technology advances very rapidly. In the field of FIP resources acquisitions, an offeror will often base a technical approach on new, proprietary technology. Offerors must be reassured that their proprietary information will not be “leaked” or released to competitors, causing them to lose their technological advantage.

Copyright Act (1980)

The *Copyright Act of 1980* amended the copyright laws to recognize the realities of modern data processing practices. Prior to computers, copyright laws were written largely to protect authors from others using their writing for profit.

Most computer software is copyrighted. In those cases where an application contains or uses copyrighted software, users are responsible for protecting the rights of the copyright holder. This means that the user must ensure that copyrighted software is not improperly disclosed, used or copied without a licensing agreement. *Section 117 of the Copyright Act (amended 1987) was added to permit copying of copyrighted software for backup or archival purposes if a copy is required to install the software on a computer.*

(continued on next page)

1.3 Impact of Key Statutes on Acquisition of FIP Resources *(continued)*

Defense
Acquisition
Improvement Act
(1986)

The *Defense Acquisition Improvement Act of 1986* (Pub. L. 99-591), established the position of Under Secretary of Defense for Acquisition and clarifies the functions of other civilian acquisition professionals in DoD. The Act is intended to improve the procurement of supplies and services in the Department of Defense. *It also established a preference, wherever possible, for “nondevelopmental” items, including computers, rather than a build-to-specifications approach.*

Computer Security
Act (1987)

The *Computer Security Act of 1987* (Pub. L. 100-235) amends the *Brooks Act* and the *Federal Property and Administrative Services Act of 1949* to safeguard security and privacy. This law focuses responsibility for improving security and privacy of sensitive information in federal computer systems at the *National Institute of Standards and Technology (NIST)*. The Act:

- Makes NIST responsible for developing computer security guidelines and standards, with technical advice and assistance, as appropriate, from the National Security Agency
- Requires federal agencies to identify existing systems and systems under development which contain sensitive information
- Requires the development of security plans for sensitive systems, and the inclusion of a summary of the plan in the agency’s five-year information technology plan
- Requires mandatory periodic training requirements for all persons involved in the management, use, or operation of sensitive systems

OMB Circ. A-130 FIRMR 201-20.103-6 201-39.1001 201-39.5205-5
--

Further guidelines on security requirements are in OMB Circular A-130, the FAR, and the FIRMR. The FIRMR requires that security needs be identified during requirements analysis. Both the FAR and FIRMR provide guidance and standard clauses for inclusion in solicitations.

SUMMARY

In this first chapter you learned about the statutes that uniquely apply to, or have an unusual impact on, the acquisition of FIP resources. The next chapter discusses the OMB Circulars which implement these statutes.

CHAPTER 2

OMB CIRCULARS THAT APPLY TO THE ACQUISITION OF FIP RESOURCES

Chapter Vignette

Mark had finished reviewing the many statutes that apply to the acquisition of FIP resources.

“That wasn’t too bad,” he said. “I can understand why these laws are important, but they sure don’t seem very specific to this procurement. Now I’ll just check the FAR and that should do it.”

“Not so fast,” Marcia told him. “Unless you also research the Office of Management and Budget Circulars, you will have an incomplete and misleading grasp of the references you will need. These OMB Circulars provide more guidance and place certain specific responsibilities on Government agencies.”

She placed a folder of OMB circulars on his desk.

Course Learning Objectives

At the end of this chapter, you will be able to:

Overall:

Identify and explain the impact of OMB Circulars that uniquely apply to, or have unusual impact on, the acquisition of FIP resources.

Individual:

2.1 Identify OMB Circulars that uniquely apply to, or have unusual impact on, the acquisition of FIP

resources: A-130

A-94

A-109

A-76

A-127

A-11

2.2 Explain the impact of the following OMB Circulars on the acquisition of FIP resources:

A-130

A-94

A-109

A-76

A-127

A-11

Chapter Overview

Scope

OMB Circulars implement the intent of the statutes discussed in Chapter 1 and establish executive branch policies on behalf of the President. These circulars are part of the second tier of guidelines affecting FIP resources acquisition. (See illustration on page 1–6.) These circulars and the date of the latest version are listed in the table below.

KEY OMB CIRCULARS AFFECTING FIP RESOURCES ACQUISITION	
OMB Circular A-130, Revised, Transmittal Memorandum No. 1	June 25, 1993
OMB Circular A-94, Revised, Transmittal Memorandum No. 64	February, 1993
OMB Circular A-109	April 5, 1976
OMB Circular A-127, Revised, Transmittal Memorandum No. 1	July 23, 1993
OMB Circular A-76, Revised	August 4, 1983
OMB Circular A-11, Revised, Transmittal Memorandum No. 64	August 4, 1993

This chapter discusses these Circulars and several related documents published by the Office of Management and Budget (OMB) which have a major impact on the acquisition of FIP resources.

If you acquire FIP resources, you should have current copies of these OMB Circulars on-hand and be familiar with them. Copies are available from OMB: call (202) 395-7332 and ask for the publications office.

After you complete this chapter, you will be able to identify and locate in the text the OMB circulars that affect the FIP resources acquisition process.

(continued on next page)

Chapter Overview *(continued)*

References

In order to thoroughly understand this discussion about OMB Circulars, you should study the key references addressed by this chapter:

OMB Circular A-130, *Management of Federal Information Resources*

OMB Circular A-94, *Guidelines and Discount Rates for Benefit-Cost Analysis of Federal Programs*

OMB Circular A-109, *Major System Acquisitions*

OMB Circular A-127, *Financial Management Systems*

OMB Circular A-76, *Performance of Commercial Activities*

OMB Circular A-11, *Preparation and Submission of Budget Estimates*

NOTE that some of these OMB Circulars were not written specifically to govern FIP resources, but they all have a major impact on FIP resources acquisitions.

Topics Covered in this Chapter

This chapter addresses OMB Circulars which directly affect the FIP resources acquisition process. The major topics are:

SECTION	TITLE	PAGE
2.1	OMB Circular A-130, <i>Management of Federal Information Resources</i>	2-5
2.2	OMB Circular A-94, <i>Guidelines and Discount Rates for Benefit-Cost Analysis of Federal Programs</i>	2-8
2.3	OMB Circular A-109, <i>Major System Acquisitions</i>	2-13
2.4	OMB Circular A-127, <i>Financial Management Systems</i>	2-18
2.5	OMB Circular A-76, <i>Performance of Commercial Activities</i>	2-19
2.6	OMB Circular A-11, <i>Preparation and Submission of Budget Estimates</i>	2-24

2.1 OMB Circular A-130, *Management of Federal Information Resources*

OMB Circular A-130

OMB Circular A-130, *Management of Federal Information Resources*, is the Office of Management and Budget's *primary policy on information resources acquisition and management*.

This circular implements the provisions of several statutes you studied in Chapter 1—namely, the *Federal Property and Administrative Services Act of 1949*, the *Privacy Act of 1974*, the *Paperwork Reduction Act of 1980*, and the *Paperwork Reduction Reauthorization Act*. For example, OMB Circular A-130 requires agencies to designate senior officials, implementing the provisions of the *Paperwork Reduction Act*. (See Chapter 1 if you need to review these laws.)

Summary of Contents

OMB Circular A-130 establishes policy for the management of Federal information processing resources in two broad areas:

1. information management
 2. information systems and information technology management.
-

Information Management Policies

Information management policies recognize information as a valuable resource requiring effective agency management. These policies address:

- Information management planning
- Information collection and dissemination (manual and electronic)
- Records management
- Agency information dissemination management systems
- Privacy and security safeguards

In addition, “improperly restrictive practices” are discouraged. These require that agencies avoid establishing:

- Exclusive or restricted distribution arrangements that interfere with the availability of information to the public on a timely and equitable basis, or
- Restrictions, fees, or royalties on the reuse, resale, or redissemination of federal information products by the public

You will note that these restrictions could affect acquisitions you might conduct for FIP systems—particularly if you were to buy contractor-provided information services!

2.1 OMB Circular A-130, *Management of Federal Information Resources*

(continued)

Information Technology Policies

Information systems and information technology management policies also affect FIP resources acquisition. Among these eighteen policies are requirements that agencies:

- Establish multiyear strategic planning processes
- Meet information processing needs through interagency sharing or commercial sources
- Acquire information technology competitively to minimize total life cycle costs
- Acquire off-the-shelf software, unless custom software development has been documented as more cost effective
- Assure continuity of support should normal operations be disrupted by an emergency
- Use Federal standards
- Apply up-to-date technology to improve operations, reduce costs, and deliver services to the public

Major Appendices

Four major appendices to A-130 provide procedures for implementing various policies set forth in the circular.

Appendix I, *Federal Agency Responsibilities for Maintaining Records About Individuals*, addresses agency responsibilities for implementing provisions of the *Privacy Act*—especially precautions the Government and contractors must take when maintaining records about individuals. FAR 52.224-1 and -2 and FIRM 201-39.5205-5 provide solicitation provisions for use when contracting for services that include maintenance of a system of records on behalf of the Government. Such contracts are subject to audit to “ensure that the wording of each contract makes the provisions of the Act binding on the contractor and his or her employees.”

Appendix II addresses *Cost Accounting, Cost Recovery, and Interagency Sharing of Information Technology Facilities*. If you solicit for the operation of information technology facilities on behalf of the Government, you must comply with policies established in this Appendix.

(Topic continued on next page)

2.1 OMB Circular A-130, *Management of Federal Information Resources*

(continued)

Major Appendices
(continued)

Appendix III, *Security of Federal Automated Information Systems*, provides policies, procedures, and responsibilities related to information systems security. Among other requirements, agencies must define and approve security requirements and specifications before acquiring or developing applications. These policies apply, for example, when you contract for systems development or for contractor-operated facilities. The policies are implemented in FIRMR 201-21.3, *Security and Privacy*, and FIRMR Bulletin C-22, *Security and Privacy Protection of Federal Information Processing (FIP) Resources*.

Appendix IV, *Analysis of Key Sections*, provides a general context and explanation for the contents of the key sections of OMB Circular A-130.

[This circular rescinded OMB Circulars A-3, A-71, A-90, A-108, A-114 and A-121.]

2.2 OMB Circular A-94, *Guidelines and Discount Rates for Benefit-Cost Analysis of Federal Programs*

OMB Circular A-94

OMB Circular A-94, *Guidelines and Discount Rates for Benefit-Cost Analysis of Federal Programs*, is also important because it establishes discount rates to be used when conducting several types of economic analyses required during an acquisition, namely:

- Benefit-cost analysis,
 - Cost effectiveness analysis, and
 - Lease-purchase analysis.
-

What are Discount Rates?

Discount rates are factors used to convert future dollars to the value of today's dollars—the present value. Present value discounting is based on the concept that money is worth more (in buying power) today than it will be next year. Discounting, therefore, *reduces* future dollars to their value today. For example, at a 7% discount rate, \$107 in next year's dollars is worth \$100 today. Present value discounting is the opposite of compounding interest.

Present value discounting is used so that two alternatives with different streams of costs can be reasonably and equitably compared.

OMB publishes the latest discount rates annually in Appendix C of this circular. Rates are updated with the President's budget and are effective through February each year. [Remember, you can call the OMB publications office on 202-395-7332.]

What is Net Present Value ?

Net Present Value equals the total projected benefits discounted to present value MINUS the total projected costs discounted to present value. When benefits exceed costs, net present value (or NPV) is a positive number. A net benefit is expected. When costs exceed benefits, NPV is a negative number. A net cost is expected.

OMB Circular A-94 specifies that the standard criterion for deciding whether a Government program or acquisition can be justified on economic principles is *net present value*. In other words, will benefits exceed costs?

(You will learn more about present value analysis in Chapter 28, including step-by-step procedures for calculating present value.)

2.2 OMB Circular A-94, *Guidelines and Discount Rates for Benefit-Cost Analysis of Federal Programs* (continued)

Benefit-Cost Analysis

OMB requires that a benefit-cost analysis be conducted for *every* FIP resources acquisition, commensurate with its size and scope. This means that the more complex and expensive acquisitions require detailed benefit-cost analysis.

The benefit-cost analysis is conducted during the planning phase of an acquisition to choose the most cost-beneficial alternative. What your acquisition will buy is decided in part by the benefit-cost analysis.

OMB Circular A-94 specifies that benefit-cost analysis is the preferred technique for calculating costs and benefits and selecting an alternative whenever you are considering an acquisition. It provides guidance on:

- Stating the **rationale** for the acquisition;
 - Stating the explicit **assumptions** used to arrive at benefits and costs;
 - Evaluating **alternatives**; and
 - Verifying that actual costs and benefits are achieved as projected during the benefit-cost analysis (**verification**).
-

Cost Effectiveness Analysis

Circular A-94 also establishes that under certain circumstances, agencies may conduct a *cost effectiveness analysis* instead of a benefit-cost analysis. A cost effectiveness analysis is essentially a one-sided benefit-cost analysis: only costs are evaluated, not benefits.

This type of analysis is used:

- Whenever costs will differ but benefits will be equal
- When benefits are difficult or impossible to measure

The latter exception is used by DoD when evaluating alternative weapons systems. Cost effectiveness analysis is not often used in FIP resources acquisitions.

(continued on next page)

2.2 OMB Circular A-94, *Guidelines and Discount Rates for Benefit-Cost Analysis of Federal Programs* (continued)

Lease-Purchase Analysis

OMB Circular A-94 established new policies for lease-purchase analysis in place of the rescinded Circular A-104, *Evaluating Leases of Capital Assets*. Lease-purchase analysis is used when you are considering whether to lease a FIP resource instead of direct Government purchase and ownership.

Lease-purchase analysis does not apply to the decision to acquire a FIP resource. [You learned that benefit-cost analysis is used for that purpose.] Lease-purchase analysis is used only after you've decided to acquire a resource and you need to decide whether to lease or purchase that resource.

When Does A-94 Require Lease-Purchase Analysis?

Lease-Purchase Analysis is Required When:	
Both These Conditions are Met: <ul style="list-style-type: none"> You are buying a capital asset With a fair market value exceeding \$1 million for the procurement 	
And One (or More) of These Conditions about the Resource Applies: <ul style="list-style-type: none"> Would be leased for 3 or more years Is new, with an economic life of less than 3 years, and would be leased for a term of 75% or more of its economic life Is built expressly for lease to the federal government Is leased to the federal government and clearly has no alternative commercial use 	

OMB Circular A-104 defines a *capital asset* as any tangible property, including durable goods, equipment, buildings, facilities, installations, or land. Capital assets would include FIP equipment and systems.

If lease prices are bid or available as a pricing option from vendors, you will note that lease-purchase analysis will frequently be required. After all, most FIP resources are used for three years or more and procurements regularly exceed \$1 million. Therefore, if you are determining whether to buy or lease a FIP resource, you should consult OMB Circular A-94 before you begin your economic “buy or lease” analysis.

Since A-94's lease-purchase requirement applies only to capital assets, procurement for services are excluded.

(continued on next page)

2.2 OMB Circular A-94, *Guidelines and Discount Rates for Benefit-Cost Analysis of Federal Programs* (continued)

Justification for Leasing

OMB Circular A-94 requires that your agency acquire a capital asset “*in the way that is least expensive for the government as a whole.*” In fact, the policies establish a preference for ownership, since the decision to lease must be justified.

OMB Circular A-94 describes three ways of justifying a lease. See the table below.

If:	Then:
<ul style="list-style-type: none"> • The acquisition is a separate line-item in the agency’s budget, OR • The agency or OMB determines the acquisition is “major,” OR • The total purchase price of the asset(s) to be leased would exceed \$500 million 	This is a major acquisition. Conduct a separate lease-purchase analysis
The acquisition is not “major” and the class of assets is frequently leased	Conduct a generic analysis for the class of assets (with OMB’s approval)
The acquisition is for small, short-term leases that generally save money	Establish a formal policy to lease (with OMB’s approval)

Remember, lease-or-buy analysis is intended to help you determine whether to lease or buy a given FIP resource.

Do NOT use a lease-purchase analysis to determine *what kind* of FIP asset should be acquired. For these types of analyses, you should use a cost-benefit analysis.

You should INCLUDE in a lease-purchase analysis:

- The discounted cost of leasing, including cost of lease payments by your agency for all renewal options;
- The discounted cost to the Treasury of any special tax benefits associated with the lease, such as investment tax credits, or tax deferral from accelerated depreciation allowances; and
- The discounted, full costs of buying plus relevant ancillary services connected with procurement.

You DO NOT INCLUDE the normal payment of taxes on income and profits by the lessor in the lease-purchase analysis.

(continued on next page)

2.2 OMB Circular A-94, *Guidelines and Discount Rates for Benefit-Cost Analysis of Federal Programs* (continued)

Effect of A-94 on
Procurement

Lease-purchase analysis may be conducted during procurement evaluation if you have solicited both lease and buy proposals.

OMB Circular A-94 does not *specifically* apply to procurement cost evaluation. However, the FIRMR requires in general that when the timing of payments is expected to vary among proposals, all prices and costs should be adjusted to present value. [The FIRMR references the rescinded Circular A-104 for present value discounting—an incorrect reference even if the circular were still in force.]

Remember, you will learn more about present value discounting in Chapter 28.

2.3 OMB Circular A-109, *Major System Acquisitions*

OMB Circular
A-109

OMB Circular A-109, *Major System Acquisitions*, governs the acquisition by executive branch agencies of major systems, including major FIP systems.

Definition of
Major System

OMB Circular A-109 defines a major system as “*that combination of elements that will function together to produce the capabilities required to fill a mission need.*” The elements may include hardware, equipment, software, construction, or real property.

Major system acquisition programs are those that:

- Are directed at and critical to fulfilling an agency mission;
- Entail the allocation of relatively large resources; and
- Warrant special management attention.

Note that although this definition specifies hardware and software, major systems may include more than FIP resources only.

DoD Directive 5000.1 & .2

To supplement this definition, OMB permits agencies to establish additional parameters for describing major systems, including establishing dollar thresholds, and to publish implementing procedures. DoD Directive 5000.1 and .2 provide specific advice for DoD acquisition personnel.

What Are the
Characteristics of
an A-109 Buy?

There are a number of features that “characterize” an A-109 acquisition. For example:

- Major systems requirements are based on mission needs
- A management structure is developed to support the procurement
- The acquisition is managed throughout its life cycle
- Key decision points are planned and scheduled
- Specifications are performance- or functionally-based
- Competitors are encouraged to bid innovative alternative solutions
- Competing alternative solutions are funded by the Government for demonstration before the final selection is made

It is this last characteristic—funding demonstrations for competitive evaluation and selection—that became the hallmark of an A-109 procurement.

(continued on next page)

2.3 OMB Circular A-109, *Major System Acquisitions* (continued)

Emphasis on Demonstration

Remember that A-109 places an emphasis on *demonstration by competitors*. This has been called “try before you buy,” and mandates that you require offerors to demonstrate their hardware, software or other FIP supplies or services, *before you make a final source selection*.

The A-109 Process

OMB Circular A-109 has been called a document “*that could become the most important acquisition policy document ever published by any branch of the United States Government*.” The reason for this statement is that A-109 mandated the use of important management principles to make the procurement of major systems more effective.

These management principles have had a significant impact on the acquisition of major systems, especially in the Department of Defense. The circular establishes that the acquisition of a major system is a *process to be managed*. That process includes:

- Analysis of the agency’s mission
- Determination of mission needs and program objectives
- System requirements and program planning
- System acquisition planning
- Budgeting
- Funding
- Research
- Engineering
- Development
- Testing and Evaluation
- Contracting
- Production
- Program and management control

Today, we talk in terms of mission, objectives, and life cycle management—even if we rarely, if ever, fund demonstration phases for FIP systems. So in a way, the prophecy has been accurate. OMB Circular A-109 has proven extremely important for its effect on the fundamentals of contracting.

(continued on next page)

2.3 OMB Circular A-109, *Major System Acquisitions* (continued)

Acquisition Strategies

We take these management principles for granted today, but A-109 caused a fundamental change when it *mandated* the use of these principles in a standard, systematic manner in all agencies. The application of these principles resulted in the development of *acquisition strategies* for procurement of all major systems, including FIP systems.

You will be concerned in *any* acquisition including for FIP resources with the need to develop tailored, well-planned acquisition strategies.

Examples of Acquisition Strategies

Examples of the elements in acquisition strategies that you may use in a major FIP system acquisition include:

- Use of contracting as a tool in the acquisition process
- Scheduling of essential elements and milestones
- Demonstration, test and evaluation criteria
- Decisions on potential offerors to solicit
- Contents of solicitations
- Ways to promote, obtain, and sustain competition
- Proposal evaluation, acceptance, and rejection guidelines
- Goals for Design-to-Cost (DTC)
- Methods for projecting and managing Life-Cycle Costs (LCC)
- Use of data rights and warranties
- Ways to evaluate risks
- Need for contractor incentives
- Selection of types of contracts and plans for contract administration

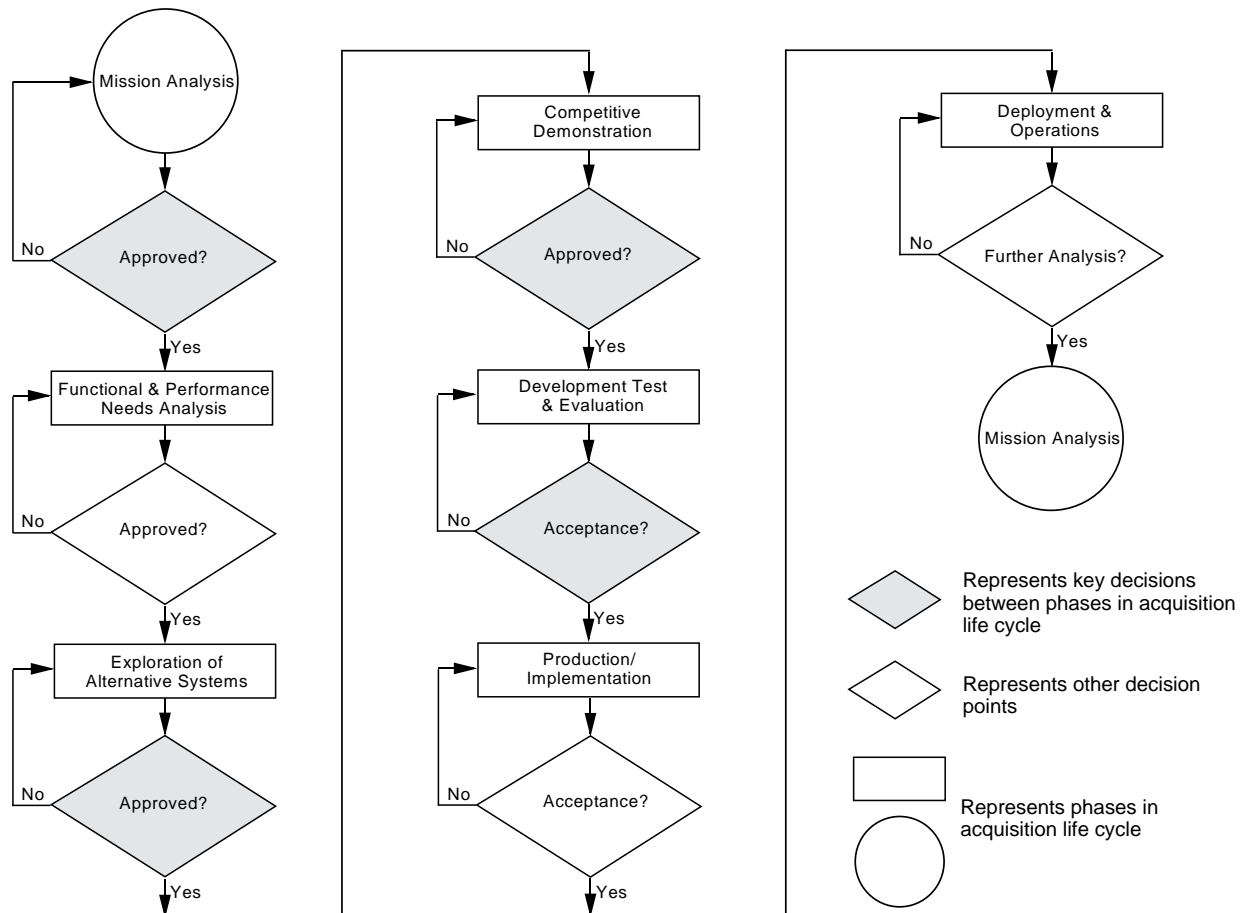
2.3 OMB Circular A-109, Major System Acquisitions *(continued)*

Key Decision Points

OMB Circular A-109 provides that four key decision points during major system acquisitions should be the responsibility of the agency head. The key decision points are:

- Establishment of mission need, system priority, and magnitude of supporting resources
- Selection of competitive system design concepts for funding during the demonstration phase
- Commitment to a system design for full-scale development
- Commitment of a system to full production (acceptance)

The following flowchart depicts the A-109 systems life. Key decision points are represented by shaded diamonds.



(Topic continued on next page)

2.3 OMB Circular A-109, *Major System Acquisitions* (continued)

Key Decision Points (continued)

Whether or not your procurement is officially designated an A-109 procurement, you should apply some of the circular's elements. For example, if you are to procure a complex, new system with computers and printers (hardware), new software, and telecommunications, you want to ensure that each subsystem (such as a software application) actually works separately with the computers, before full scale acquisition, integration, and installation in the total system.

You might, for example, require a software *demonstration*, to be evaluated by Government, using Government evaluation factors, prior to going forward with the acquisition. These evaluation factors must be included in the solicitation

A-109 Factors for Final System Selection

A-109 mandates that the final system selection for major systems acquisition be based on the following factors:

- Performance against mission needs,
- Evaluation of costs, and
- Contractor's proven management, financial, and technical capabilities related to contract requirements.

This means that when you are developing the evaluation factors for source selection, you *must* include the final system selection factors in the evaluation process. You should arrange to have highly qualified technical experts observe and evaluate the demonstrations. Normally, these will be persons who are members of the technical evaluation team(s) on the Source Selection Board (SSB).

(You will study the evaluation process further in Chapter 38, "Source Selection of FIP Resources," and Chapter 41, "Technical Evaluation for FIP Resources.")

OFPP Pamphlet No. 1

The Office of Federal Procurement Policy (OFPP) published a pamphlet which details the requirements of A-109. In addition, the pamphlet describes the stages of an A-109 procurement for ADP systems specifically. You should obtain a copy of this pamphlet if you regularly acquire FIP resources.

2.4 OMB Circular A-127, *Financial Management Systems*

OMB Circular A-127	<p>OMB Circular A-127, <i>Financial Management Systems</i>, prescribes policies and standards for executive agencies to follow when developing, operating, evaluating, and reporting on financial management systems.</p> <p><i>A financial management system is one type of information system that you might procure some day. If so, you should be aware that this circular sets forth specific responsibilities and sources of supply.</i></p>
Definitions	<p><i>Financial management systems</i> are the financial systems and the financial parts of other information systems.</p> <p><i>Financial systems</i> are information systems with one or more applications that:</p> <ul style="list-style-type: none">• Collect, process, maintain, transmit, and report data about financial events;• Support financial planning or budgeting activities;• Accumulate and report cost information; and• Support the preparation of financial statements.
Preferences and Sources of Supply	<p>OMB Circular A-127 prohibits the development of custom software unless other options, such as modifying existing systems or acquiring off-the-shelf software, have been considered and eliminated.</p> <p><i>You should also be aware that GSA maintains Financial Management System Software (FMSS) Multiple Award Schedule (MAS) contracts from which software which meets the government's core financial system requirements can be ordered.</i></p>

2.5 OMB Circular A-76, *Performance of Commercial Activities*

OMB Circular A-76

OMB Circular A-76, *Performance of Commercial Activities*, provides guidance on the government's performance of commercial activities. It is intended to prevent the government from competing with its own citizens.

Briefly, OMB Circular A-76 establishes three overall policies:

1. *Achieve Economy and Enhance Productivity.* Competition enhances quality, economy, and productivity. Whenever commercial sector performance of a Government operated commercial activity is permissible, this Circular and its Supplement require comparison of the cost of contracting and the cost of in-house performance to determine who will do the work.
2. *Retain Governmental Functions In-house.* Certain functions are inherently Governmental in nature, being so intimately related to the public interest as to mandate performance only by federal employees. These functions are NOT in competition with the commercial sector and must be performed by Government employees.
3. *Rely on the Commercial Sector.* The federal government shall rely on commercially available sources to provide commercial products and services. In accordance with the provisions of this Circular, the Government shall NOT start or carry on any activity to provide a commercial product or service if the product or service can be procured more economically from a commercial source.

Commercial Activities

A *commercial activity* is one operated by an executive agency which provides a product or service that could be obtained from a commercial source and is *separable* from other activities. Of course, if the commercial activity can NOT be separated from other activities, in-house or contractually, then that activity may NOT really be a candidate for a study. *This is an important distinction.*

For example, some record-keeping activities, such as tax information, are very sensitive and CANNOT be separated from other agency activities; even if a private company could keep the tax records more cheaply, there would be no point in conducting an A-76 study to transfer this work to a commercial source.

(Topic continued on next page)

2.5 OMB Circular A-76, *Performance of Commercial Activities* (continued)

Commercial Activities (continued)

Examples of activities that *might* be obtained from a commercial source include:

- Automatic data processing services,
- Programming and system analysis, design, development, and simulation,
- Data entry services,
- Systems engineering and installation, and
- Equipment installation, operation and maintenance.

This means that if the Government has a requirement for software, the Government must consider commercial sources rather than automatically developing the software in-house.

Exclusions

OMB Circular A-76 does not apply to *governmental functions* which are functions so intimately related to the public interest as to mandate performance by government employees. These functions normally require either the exercise of discretion in applying government authority or the use of value judgments in making decisions for the government.

Examples include:

- Direction and management of the Armed Services or intelligence activities
- Direction of federal employees
- Regulation of natural resources
- Regulation of industry and commerce
- Direction of monetary transactions and entitlements

These functions are sometimes referred to as *inherently governmental* and may *not* be contracted out.

(continued on next page)

2.5 OMB Circular A-76, *Performance of Commercial Activities* (continued)

Exceptions:
Government
Performance of
Commercial
Activity Allowed

There are four conditions under which Government performance of a commercial activity is authorized. These conditions are shown in the following table:

Government Performance of a Commercial Activity		
If...	Then...	Otherwise...
1. No satisfactory commercial source is available... or 2. There are national defense concerns (determined by the Secretary of Defense)... or 3. The commercial activity involves patient care at hospitals operated by the Government if in the best interest of patient care... or 4. The Government can perform the commercial activity at lower cost...	Government performance of a commercial activity is authorized	Government performance of a commercial activity is NOT authorized and an A-76 study should be done

Inventory and
Review
Procedures

If the conditions in the table above do NOT apply, then an agency may proceed with the A-76 inventory and review process. The A-76 process has two major phases: *inventory* and *review*. Agencies must first identify commercial activities now being performed in-house (inventory phase) and then evaluate those activities (review phase) to make sure that in-house performance is more cost-effective than commercial performance.

The review procedure considers four conditions:

1. Existing in-house
2. Expansions
3. Existing contracts
4. New requirements

(continued on next page)

2.5 OMB Circular A-76, *Performance of Commercial Activities* (continued)

Cost Comparison Study

The review procedure consists of three tasks. Each task results in a separate document.

1. Prepare a *management study*, to outline the most efficient, effective and economic organization
2. Complete a *Performance Work Statement (PWS)* that serves as a work statement / scope of services on which the Government and the prospective bidders base their estimates of performance
3. Complete a *cost comparison* and make a decision to either perform the work in-house or through a contract

This circular requires contracting officers to:

- Give appropriate consideration to relative cost when deciding between Government performance and performance under contract, and
- Require contractors to offer firm prices.

Cost is often the major factor you must consider in deciding whether to perform a function in-house or contract out. OMB Circular A-76 Supplement 1 (Part 1, Chapter 2, Section G) states that:

An existing in-house activity shall NOT be converted to contract performance on the basis of economy unless the projected cost advantage to the Government is at least 10 percent of the in-house personnel-related cost for the performance period.

So, for example, if a study showed that a commercial source could save 8 to 9 percent of labor and related personnel costs, you would still NOT recommend contracting out of the commercial activity to a commercial source.

(continued on next page)

2.5 OMB Circular A-76, *Performance of Commercial Activities* (continued)

Supplement 1 to
A-76

Supplement No. 1 to OMB Circular A-76 explains in detail the procedures for determining if a function should be performed in-house or by contract.

Sections include:

- Policy Implementation,
 - Management Study Guide, and
 - The Cost Comparison Handbook.
-

Supplement 2 to
A-76

Supplement No. 2 to OMB Circular A-76 is *A Guide for Writing and Administering Performance Statements of Work for Service Contracts*.

You should obtain a copy of this document. It provides guidance on the development of statements of work in general, not just those prepared under A-76 procedures.

2.6 OMB Circular A-11, *Preparation and Submission of Budget Estimates*

OMB Circular A-11

OMB Circular A-11, *Preparation and Submission of Budget Estimates*, provides instructions and guidance on the preparation and submission of budget documents.

Section 43 of the circular applies specifically to information technology systems, specifying documents required to support requests for funding. These requirements include:

- A listing of major information system initiatives and all financial management systems regardless of cost—referred to as exhibit 43A
- An agency acquisition plan, where the cumulative obligations for acquisition exceed \$5 million over the budget term—referred to as exhibit 43B
- A benefit-cost analysis for major information systems initiatives

In addition, OMB establishes in section 43.7 that agencies prepare benefit-cost analyses for ALL proposed investments in information systems.

Major Information System Initiatives

For the purposes of A-11, a major information system initiative requires expenditures exceeding \$25 million over the information systems life cycle or \$10 million in any one fiscal year.

Effect

You may find this information useful if you:

- Need information about funds available for the acquisition
 - Want to know what potential contractors may have learned about funding levels for the acquisition
 - Are planning to meet the future workload requirements in your procurement organization
 - Need support in requiring that a benefit-cost analysis be prepared for the acquisition
-

SUMMARY

In this chapter, you learned about the OMB Circulars that uniquely affect, or have an unusual impact on, the acquisition of FIP resources. You learned that, together with the laws, these OMB Circulars provide a policy foundation for the development of regulations and must be considered in your acquisition planning. The next chapter discusses other policies that apply to the acquisition of FIP resources.

CHAPTER 4

ETHICS ISSUES CONCERNING FIP RESOURCES

Chapter Vignette

Over the five years that he has worked for the Government, Mark has heard many people commenting about ethics in Government. He has heard politicians running for election promise to clean up the fraud, waste, and abuses that are rampant in Government. He has talked to his co-workers and he knows that all are honest and hard-working. It really seems that a few "bad apples" are getting all the press while millions of others do a fantastic job each day.

At the same time, he has heard his co-workers complain about all the ethics guidance that they receive. Mark believes that ethical behavior is the key to doing his job properly, and he never understood all the complaints of his co-workers.

He has decided to collect as much information as possible about Government ethics.

Course Learning Objectives

At the end of this chapter, you will be able to:

Overall:

Determine ethics issues concerning FIP resources
(DoD requirement)

Individual:

4.1 Determine ethics issues concerning FIP resources
(DoD requirement).

Chapter Overview

Scope

Guidance on ethics for Government personnel comes from a number of sources, including the President, Congress, Judiciary, Office of Government Ethics, and individual agencies. This Chapter will examine some of the key principles, statutes, and regulations that define ethical requirements for Government service. Special emphasis will be placed on an examination of procurement integrity requirements.

References

In order to understand the topics in this chapter, you may require access to the following references:

- Executive Orders 12674 and 12731
 - 5 U.S.C
 - 18 U.S.C
 - 41 U.S.C
 - Office of Federal Procurement Policy Act
 - Freedom of Information Act
 - Privacy Act
 - DoD Joint Ethics Regulation
 - Standards of Ethical Conduct for Employees of the Executive Branch
 - FAR 3.104
 - Agency-specific directives concerning ethics
-

(continued on next page)

Chapter Overview *(continued)*

Topics Covered in
this Chapter

This chapter includes the following topics:

SECTION	TITLE	PAGE
4.1	Principles of Ethical Conduct	4-5
4.2	Laws and Regulations on Standards of Conduct	4-7
4.3	Procurement Integrity	4-14
	4.3.1 Key Definitions	4-15
	4.3.2 Restrictions and Prohibited Conduct	4-21

4.1 Principles of Ethical Conduct

Executive Orders
12674 and 12731

President George Bush issued Executive Orders 12674 and 12731, Principles of Ethical Conduct for Government Officers and Employees, "to establish fair and exacting standards of ethical conduct for all executive branch employees." These orders delineate 14 Principles of Ethical Conduct, to "ensure that every citizen can have complete confidence in the integrity of the Federal Government."

1. Public service is a public trust, requiring employees to place loyalty to the Constitution, the laws, and ethical principles above private gain.
2. Employees shall not hold financial interests that conflict with the conscientious performance of duty.
3. Employees shall not engage in financial transactions using nonpublic Government information or allow the improper use of such information to further any private interest.
4. An employee shall not, except pursuant to such reasonable exceptions as are provided by regulation, solicit or accept any gift or other item of monetary value from any person seeking official action from doing business with, or conducting activities regulated by the employee's agency, or whose interests may be substantially affected by the performance or nonperformance of the employee's duties.
5. Employees shall put forth honest effort in the performance of their duties.
6. Employees shall make no unauthorized commitments or promises of any kind purporting to bind the Government.
7. Employees shall not use public office for private gain.

(Topic continued on next page)

4.1 Principles of Ethical Conduct *(continued)*

Executive Orders
12674 and 12731

8. Employees shall act impartially and not give preferential treatment to any private organization or individual.
 9. Employees shall protect and conserve Federal property and shall not use it for other than authorized activities.
 10. Employees shall not engage in outside employment or activities, including seeking or negotiating for employment, that conflict with official Government duties and responsibilities.
 11. Employees shall disclose waste, fraud, abuse, and corruption to appropriate authorities.
 12. Employees shall satisfy in good faith their obligations as citizens, including all just financial obligations, especially those—such as Federal, State, or local taxes—that are imposed by law.
 13. Employees shall adhere to all laws and regulations that provide equal opportunity for all Americans regardless of race, color, religion, sex, national origin, age, or handicap.
 14. Employees shall endeavor to avoid any actions creating the appearance that they are violating the law or the ethical standards promulgated pursuant to this order.
-

4.2 Laws and Regulations on Standards of Conduct

Introduction

The Principles of Ethical Conduct are further defined in numerous laws and regulations. Some of these laws and regulations pertain to all Government personnel, others apply only to certain groups (e.g., Department of Defense personnel).

Statutes Applicable to All Personnel

Three of the primary sources of statutory ethics guidance are 5 U.S.C., 18 U.S.C., and 41 U.S.C. Some of the most significant statutes that apply to personnel in all Government agencies are identified below. The list is meant to identify key statutes, not be a comprehensive list of all ethics statutes. Consult your agency ethics guidance or ethics official for details.

5 U.S.C.

- Restrictions on disclosure of certain sensitive Government information under the Freedom of Information Act (FOIA) and the Privacy Act (§552 and 552a).
- Prohibition against certain personnel practices (§2302)
- Limitations on outside employment and prohibition of honoraria, confidential reporting of payments to charities in lieu of honoraria (§2636).
- Prohibition against participation in the employment or promotion of relatives (§3110)
- Prohibition against employment of a person convicted of participating in or promoting a riot or disorder (§7313).
- Provisions governing the receipt and disposition of foreign gifts and decorations (§7342)
- Prohibition against gifts to superiors (§7351)
- Prohibition against employment of an individual who habitually uses intoxicating beverages to excess (§7352).
- Prohibition against solicitation and receipt of gifts from prohibited sources (§7353)

(Topic continued on next page)

4.2 Laws and Regulations on Standards of Conduct *(continued)*

Statutes Applicable
to All Personnel
(continued)

18 U.S.C.

- Prohibition against solicitation or receipt of bribes (§201(b)).
- Prohibition against solicitation or receipt of illegal gratuities (§201(c)).
- Prohibition against seeking or receiving compensation for certain representational services before the Government (§203).
- Prohibition against assisting in the prosecution of claims against the Government or acting as an agent or attorney before the Government (§205).
- Post-employment restrictions applicable to former Government employees (§207).
- Prohibition against participating in matters affecting an employee's own financial interests or the financial interests of other specified persons or organizations (§208).
- Prohibition against receiving salary or any contribution to or supplementation of salary as compensation for Government service from a source other than the United States (§209).
- Prohibitions against solicitation or acceptance of anything of value to obtain public office for another (§211).
- General prohibition against acting as an agent of a foreign principle required to register under the Foreign Agents Registration Act (§219)
- Prohibition against unauthorized use of documents relating to claims from or by the Government (§285).
- Prohibition against conspiracy to commit an offense against or to defraud the United States (§371)
- Prohibition against counterfeiting or forging transportation requests (§508).
- Prohibition against certain political activities (§602, 603, 606, and 607)
- Prohibition against embezzlement or conversion of Government money or property (§641).

4.2 Laws and Regulations on Standards of Conduct *(continued)*

Statutes Applicable
to All Personnel
(continued)

18 U.S.C. *(continued)*

- Prohibition against failing to account for public money (§643).
- Prohibition against embezzlement of the money or property of another person that is in the possession of an employee by reason of his employment (§654)
- Prohibition against disclosure of classified information (§798 and 50 U.S.C. §783(b))
- Prohibition against fraud or false statements in Government matters (§1001).
- Prohibition against the use of the franking privilege (§1719).
- Prohibition against the disclosure of proprietary information and certain other information of a confidential nature (§1905).
- Restrictions on the use of public funds for lobbying (§1913)
- Prohibition against interference with civil service examinations (§1917)
- Prohibition against disloyalty and striking (§1918)
- Prohibition against concealing, mutilating, or destroying a public record (§2071).

31 U.S.C.

- Prohibition against misuse of a Government vehicle (§1344)

41 U.S.C.

- Restrictions on procurement officials negotiating for employment with competing contractors (§423(b)(1)).
 - Prohibition against solicitation or receipt of gifts from competing contractors (§423(b)(2)).
 - Prohibition against unauthorized disclosure of certain procurement sensitive information, including proprietary or source selection information (§423(b)(3) and 423(d)).
 - Post-employment restrictions applicable to former procurement officials (§423(f)).
-

(continued on next page)

4.2 Laws and Regulations on Standards of Conduct *(continued)*

Statutes Applicable to DoD Personnel

In addition to the statutes that apply to all personnel, there are statutes that only apply to specific groups such as DoD personnel and former DoD personnel. As with the general list above, this list is meant to identify key statutes, not a comprehensive list of all ethics statutes. Consult your agency ethics guidance (e.g., DoD Joint Ethics Regulation) for details.

10 U.S.C.

- Requirements relating to private employment contacts between defense contractors and civilian DoD employees at pay rates of GS/GM 11 or above, or military officers in grades 0-4 or above (§2397a).
- Requirements for reports from former civilian DoD employees GS/GM 13 or above, and military officers 0-4 or above, for a period of two years after leaving Federal Government service, if (1) they are employed with a defense contractor awarded \$10 million in defense contracts during the year preceding their employment, and (2) they receive at least \$25,000 a year (\$12 per hour) from the defense contractor (§2397).
- Two-year prohibition on former civilian DoD employees GS/GM 13 or above, or a military officer 0-4 or above, accepting more than \$250 in payment, gift, benefit, reward, favor, or gratuity (i.e., compensation) from defense contractors who had defense contracts in a total amount greater than \$10 million during the fiscal year preceding the fiscal year that such compensation was accepted, if the individual:
 - Spent the majority of his/her working days during the two-year period prior to leaving Federal Government service performing a procurement function at a site or plant owned or operated by the defense contractor; or
 - Performed procurement functions relating to a major system, on a majority of his/her working days during the two year period prior to leaving Federal Government service, and in the performance of those functions participated personally and substantially in a manner involving decision making responsibilities, through contact with the defense contractor; or
 - Was a member of the Senior Executive Service or above, a former military officer 0-7 or above, acted as a primary representative of the United States during the two-year period prior to leaving Federal Government service, in the negotiation of a defense contract in an amount in excess of \$10 million with the defense contractor, or in the negotiation of an unresolved claim in excess of \$10 million. (§2397b)

(Topic continued on next page)

4.2 Laws and Regulations on Standards of Conduct *(continued)*

Statutes Applicable to DoD Personnel (continued)

18 U.S.C.

- Prohibits retired military officers, for a period of two years after release from active duty, from:
 - Accepting any compensation for the representation of any individual in the sale of anything to the United States through the Military Department from which he/she retired.
 - Prosecuting or assisting in the prosecution of any claim against the United States involving the Military Department from which he/she retired, or involving any subject matter with which he/she was directly connected while in an active duty. (§281)

37 U.S.C.

- Prohibits the Federal Government from paying any retired officer, for a period of three years after his/her name is placed on a retired list of the Regular Army, Navy, Air Force or Marine Corps, if the retired officer is engaged (for himself/herself or others) in selling, contracting, or negotiating to sell, supplies or war material to an agency of DoD, the Coast Guard, the Public Health Service, or the National Oceanic and Atmospheric Administration. (§801)

Office of Government Ethics Standards of Ethical Conduct

The Office of Government Ethics has published Standards of Ethical Conduct for Employees of the Executive Branch. This publication addresses many of the key issues addressed in the Presidential Principles of Ethical Conduct and the statutes identified above. Key elements include:

- General provisions.
 - Applicability
 - Supplementary agency regulations
 - Disciplinary and corrective action
 - Ethics advice
- Gifts from outside sources.
 - Applicability
 - Supplementary agency regulations
 - Disciplinary and corrective action
 - Ethics advice

(Topic continued on next page)

4.2 Laws and Regulations on Standards of Conduct *(continued)*

Office of
Government
Ethics Standards
of Ethical Conduct
(continued)

- Gifts between employees.
 - General standards
 - Exceptions
 - Proper disposition of prohibited gifts
 - Conflicting financial interests.
 - Disqualifying financial interests
 - Prohibited financial interests
 - Impartiality in performing official duties
 - Personal and business relationships
 - Extraordinary payments from former employers
 - Seeking other employment
 - Disqualification while seeking employment
 - Waiver or authorization permitting participation while seeking employment
 - Disqualification based on an arrangement concerning prospective employment or otherwise after negotiations.
 - Misuse of position
 - Use of public office for private gain
 - Use of nonpublic information
 - Use of Government property
 - Use of official time
 - Outside Activities
 - Conflicting outside employment and activities
 - Prior approval for outside employment and activities
 - Outside earned income limitations applicable to certain Presidential appointees and other noncareer employees
 - Service as an expert witness
 - Participation in professional associations
 - Teaching, speaking, and writing
 - Fundraising activities
 - Just financial obligations
-

(continued on next page)

4.2 Laws and Regulations on Standards of Conduct *(continued)*

Supplementary Standards of Ethical Conduct

Individual agencies can supplement the Standards of Ethical Conduct for Employees of the Executive Branch. The DoD, for example, has established ethical standards (5 CFR 3601) related to the following subjects.

- Additional exceptions for gifts from outside sources.
 - Additional limitations on gifts between DoD employees.
 - Requirement for a written notice to accomplish disqualification from a particular matter because of disqualifying financial interest, personal or business relationships, or prospective employment.
 - Prohibition against DoD employees knowingly soliciting or making a solicited sale to DoD personnel of lower rank, grade, or position.
 - Requirement for prior approval for outside employment and business activities for all employees other than special Government employees, who are required to file a financial disclosure report.
 - Requirement for employees to make a disclaimer for speeches and writings devoted to agency matters when the subject deals in significant part with any ongoing or announced policy, program, or operation of the DoD.
-

4.3 Procurement Integrity

Introduction

FAR 3.104

All Government officials require a knowledge of the ethics issues covered in Sections 4.1 and 4.2. However, as a procurement official in the acquisition of FIP resources, it is particularly important that you have a working understanding of the requirements of Section 27 of the Office of Federal Procurement Policy Act (41 U.S.C. 423) as implemented in FAR 3.104. This Section will examine key requirements of the Act. However, if you have specific questions, you should consult FAR 3.104 or contact your Agency Ethics Official.

4.3.1 Key Definitions

Procurement Official

You are a procurement official if you are a Government civilian or military official or an employee who has participated personally and substantially in any of the following activities for a particular procurement:

- Drafting a specification or a statement of work;
- Review and approval of a specification or statement of work;
- Preparation or development of procurement or purchase requests;
- The preparation or issuance of a solicitation;
- Evaluation of bids or proposals;
- Selection of sources;
- Negotiations to establish the price or terms and conditions of the contract or contract modification; or
- Review and approval of the award of the contract or contract modification.

Employee. The term "employee" includes contractors, subcontractors, consultants, experts, or advisors (other than a competing contractor) acting on behalf of, or providing advice to, the Government with respect to any phase of the procurement concerned.

Personal and Substantial Participation. To participate personally and substantially in a particular procurement, you must have active and significant involvement in activities directly related to the procurement.

- To participate personally, you must participate directly. This includes the participation of a subordinate when actually directed by the supervisor in the matter.

(Topic continued on next page)

4.3.1 Key Definitions *(continued)*

Procurement
Official
(continued)

-
- To participate substantially, your involvement must be significant to the matter. For example, the review of procurement documents solely to determine compliance with applicable regulatory, administrative, or budgetary requirements or procedures, does not constitute substantial participation in a procurement. To be substantial, participation must be more than official responsibility, knowledge, perfunctory involvement, or involvement on an administrative or peripheral issue. A finding of substantiality should be based not only on the effort devoted to a matter, but on the importance of the effort. While a series of peripheral involvements may be insubstantial, the single act of approving or participating in a critical step may be substantial.

Other Involvement. Generally, you will not become a procurement official solely by participating in the following activities:

- Federal advisory committees that are established and function in accordance with the Federal Advisory Committee Act, unless the Federal advisory committee is established or used for the purpose of performing one of the functions listed in this definition and the individual member's participation in that function is personal and substantial;
 - Agency level boards, panels, or other advisory committees that review program milestones or evaluate and make recommendations regarding alternative technologies or approaches for satisfying broad agency level missions or objectives;
 - The performance of general, technical, engineering, or scientific effort having broad application not directly associated with a particular procurement, notwithstanding that such general, technical, engineering, or scientific effort subsequently may be incorporated into a particular procurement;
 - Clerical functions supporting the conduct of a particular procurement; and
 - For procurements conducted under the procedures of OMB Circular A-76, participation in management studies, preparation of in-house cost estimates, preparation of "most efficient organization" analyses, and furnishing of data or technical support to be used by others in the development of performance standards, statements of work, or specifications.
-

(continued on next page)

4.3.1 Key Definitions *(continued)*

Competing Contractor

FAR 3.104-4(b)

A competing contractor with respect to any procurement is any entity (such as an individual, partnership, corporation, educational institution, nonprofit or not for profit organization, or business unit) legally capable of entering into a contract or subcontract in its own name, or is reasonably likely to become, a competitor for or recipient of a contract or subcontract under that procurement. This term includes any other person acting on behalf of such an entity. It also includes the incumbent contractor in the case of a contract modification.

An entity shall not be considered a competing contractor whenever, by action of the Government or the entity, it is clear that the entity will not, or will no longer, participate in a particular procurement.

A representative, agent, or consultant of a competing contractor is any entity, other than an officer or employee of a competing contractor, acting on behalf of, or providing advice to, a competing contractor with regard to a particular Government procurement.

Procurement Period

FAR 3.104-4(c)

Each contract award and each contract modification constitutes a separate procurement action (i.e., a separate procurement period).

Most Procurements. Except for broad agency announcements, small business innovative research programs, and unsolicited proposals, the procurement period begins on the earliest date upon which an identifiable, specific action is taken for the particular procurement and concludes upon the award or modification of a contract or the cancellation of the procurement. However, in no event shall the conduct of the procurement be deemed to have begun prior to the decision by an authorized agency official to satisfy a specific agency need or requirement by procurement.

Broad Agency Announcements and Small Business Innovative Research Programs. For broad agency announcements and small business innovative research programs, each proposal received by an agency shall constitute a separate procurement. The conduct of each procurement begins on the date a Commerce Business Daily announcement is made regarding the availability of the broad agency announcement or the date a solicitation was released for the small business innovative research program. The conduct of the procurement ends upon the award of a contract or contract modification incident to each proposal or the written rejection of each specific proposal.

(Topic continued on next page)

4.3.1 Key Definitions *(continued)*

Procurement
Period
(continued)

Unsolicited Proposal. Each unsolicited proposal shall be considered a separate procurement. For unsolicited proposals, the conduct of the procurement begins upon publication date of a general statement of agency needs, or (if your agency does not publicize a general statement of needs) upon the provision of advance guidance related to agency needs, or the receipt of the unsolicited proposal, whichever is earlier. The conduct of the procurement shall end upon the award of a contract or contract modification or the rejection of the proposal.

Gratuity or Other
Thing of Value

FAR 3.104-4(f)

A "gratuity or other thing of value" is any gift, favor, entertainment, or other item having monetary value. The phrase includes services, conference fees, vendor promotional training, transportation, lodging and meals, as well as discounts not available to the general public, and loans extended by anyone other than a bank or financial institution.

It does not include:

- Anything for which market value (e.g., retail cost, or in the case of items such as tickets, face value) is paid by you, or on your behalf, by someone other than a competing contractor, or a representative, agent, or consultant of the competing contractor;
 - Anything which is paid for by the Government, secured under Government contract, or accepted by the Government under specific statutory authority;
 - Plaques or certificates having no intrinsic value; or
 - Any unsolicited item, other than money, having a market value of \$10 or less per event or presentation.
 - Training provided by a vendor when the vendor's products are furnished under contract to the Government and the training is to facilitate the use of those products.
-

(continued on next page)

4.3.1 Key Definitions *(continued)*

Proprietary Information

FAR 3.104-4(j)

Proprietary information is information contained in a bid or proposal or otherwise submitted to the Government by a competing contractor in response to the conduct of a particular procurement, or in an unsolicited proposal, that has been marked by the competing contractor as proprietary information in accordance with applicable law and regulation.

Information shall be considered proprietary information, when:

- An attached transmittal document, such as a cover page or the label of a magnetic media storage container, is clearly marked with a restrictive legend; and
- The specific portions of the information whose disclosure the competing contractor desires to restrict are clearly and separately marked.

Proprietary information does not include information:

- That is otherwise available without restrictions to the Government, to another competing contractor, or the public;
- Contained in bid documents following bid opening, unless the bid includes descriptive literature and the bidder imposes a restriction that prevents public disclosure; or
- That the contracting officer determines to release in accordance with FAR 3.104-5(d).

Source Selection Information

FAR 3.104-4(k)

Source selection information is information (including information stored in electronic, magnetic, audio or video formats) which is prepared or developed for use by the Government to conduct a particular procurement and:

- The disclosure of which to a competing contractor would jeopardize the integrity or successful completion of the procurement concerned; and
- Is required by statute, regulation, or order to be secured in a source selection file or other facility to prevent disclosure.

(Topic continued on next page)

4.3.1 Key Definitions *(continued)*

Source Selection
Information
(continued)

Source selection information includes, but is not limited to:

- Bid prices submitted in response to a Government solicitation for sealed bids, or lists of those bid prices prior to public bid opening;
- Proposed costs or prices submitted in response to a Government solicitation (for other than sealed bids), or lists of those proposed costs or prices;
- Source selection plans;
- Technical evaluation plans;
- Technical evaluations of proposals;
- Cost or price evaluations of proposals;
- Competitive range determinations which identify proposals that have a reasonable chance of being selected for award of a contract;
- Rankings of bids, proposals, or competitors;
- The reports and evaluations of source selection panels or boards or advisory councils; or
- Information marked as “SOURCE SELECTION INFORMATION—SEE FAR 3.104” based upon a case-by-case determination by the Head of the Agency, his designee, or the contracting officer.

Possible Violation

FAR 3.104-4(1)

A possible violation is a specifically identified or documented circumstance that provides a reasonable basis to believe that a violation of procurement integrity requirements may have occurred. Rumor and hearsay are not, by themselves, a reasonable basis to conclude that a possible violation exists.

4.3.2 Restrictions and Prohibited Conduct

Introduction

FAR 3.104-3

As a participant in the acquisition process, your ethics and integrity must be above reproach. To provide a guideline, the Act delineates restrictions and prohibitions that must be adhered to by all participants.

Prohibited Conduct by Competing Contractors. During the conduct of any procurement, for which you are a procurement official, competing contractors and officers, employees, representatives, agents, and consultants of any competing contractor are prohibited from knowingly:

FAR 3.104-6(b)

- Making, directly or indirectly, any offer or promise of future employment or business opportunity to, or engaging, directly or indirectly, in any discussion of future employment or business opportunity with you, unless your recusal has been approved following the procedures in FAR 3.104-6(b);
- Offering, giving, or promising to offer or give to you, directly or indirectly, any money, gratuity, or other thing of value; or
- Soliciting or obtaining, directly or indirectly, from you, prior to the award of a contract any proprietary or source selection information regarding such procurement.

Prohibited Conduct by Procurement Officials. As a procurement official for a particular procurement, you shall not knowingly:

- Solicit or accept, directly or indirectly, any promise of future employment or business opportunity from, or engage, directly or indirectly, in any discussion of future employment or business opportunity with, any officer, employee, representative, agent, or consultant of a competing contractor, except as provided in 3.104-6(a);
 - Ask for, demand, exact, solicit, seek, accept, receive, or agree to receive, directly or indirectly, any money, gratuity, or other thing of value from any officer, employee, representative, agent, or consultant of any competing contractor for such procurement; or
 - Disclose any proprietary or source selection information regarding such procurement directly or indirectly to any person other than a person authorized by the head of your agency or the contracting officer to receive such information.
-

4.3.2 Restrictions and Prohibited Conduct *(continued)*

Introduction
(continued)

Prohibited Disclosure to Unauthorized Persons. If you are given access (authorized or unauthorized) to proprietary source selection information during the conduct of any procurement of property or services by your agency, you shall not knowingly disclose such information, directly or indirectly, to any person other than a person authorized by the head of your agency or the contracting officer to receive such information.

Post-Employment Restrictions. If while serving as an officer or employee of the Government or member of the Armed Forces, you were a procurement official with respect to a particular procurement, you may not knowingly:

- Participate in any manner, as an officer, employee, agent, or representative of a competing contractor, in any negotiations leading to the award, modification, or extension of a contract for such procurement; or
- Participate personally and substantially on behalf of the competing contractor in the performance of such contract.

These post-employment restrictions apply during the period ending 2 years after the last date that you participated personally and substantially in the conduct of such procurement or personally reviewed and approved the award, modification, or extension of any contract for such procurement.

These post-employment restrictions do not apply to employment by a competing subcontractor unless:

- The subcontractor is a first or second tier subcontractor and the subcontract is for an amount that is in excess of \$100,000; or
 - The subcontractor significantly assisted the prime contractor with respect to negotiation of the prime contract; or
 - You personally directed or recommended the particular subcontractor to the prime contractor as a source for the subcontract; or
 - You personally reviewed and approved the award, modification, or extension of the subcontract.
-

(continued on next page)

4.3.2 Restrictions and Prohibited Conduct *(continued)*

Disclosure,
Protection, and
Marking of
Proprietary and
Source Selection
Information

FAR 3.104-5

Except as specifically provided below, you may not disclose proprietary or source selection information to any person not authorized by the Agency Head to receive such information. If you do not know if information is proprietary or source selection information, or you do not know if you may disclose or receive such information, make the inquiries prescribed at FAR 3.104-8(d).

Proprietary Information. Protect proprietary and source selection information from unauthorized disclosure in accordance with FAR, applicable law, and agency regulations. Consider information contained in a bid or proposal that bears a restrictive legend (indicating proprietary data) to be proprietary information. However, information contained in a bid or proposal that does not bear that legend shall remain subject to the restrictions on disclosure contained in FAR or as otherwise required by law.

Source Selection Information. In determining whether particular information is source selection information, the originator shall assure that the information meets the criteria in FAR 3.104-4(k)(1) and consult with agency officials as appropriate. If you are responsible for preparing material that may include information designated as source selection information, mark the cover page and each page that contains source selection information with the legend “SOURCE SELECTION INFORMATION—SEE FAR 3.104.” Although the items identified above in the definition of source selection information are considered to be source selection information whether or not marked, make all reasonable efforts to mark such material with this legend.

Authorization to Receive Proprietary or Source Selection Information. The Agency Head (or designee) or the contracting officer, has the authority, in accordance with applicable agency regulations or procedures, to authorize persons, or classes of persons, to receive proprietary or source selection information when necessary to conduct the procurement. For contracts and contract modifications in excess of \$100,000:

- The Agency Head (or designee), shall establish procedures to assure that the names of all persons, identification of the classes of persons and, to the maximum extent practicable, the names of all individuals within a class of persons, authorized access to proprietary or source selection information at the contracting activity are listed in the contract file.

(Topic continued on next page)

4.3.2 Restrictions and Prohibited Conduct *(continued)*

Disclosure,
Protection, and
Marking of
Proprietary and
Source Selection
Information
(continued)

If proprietary or source selection information is authorized to be released to Government activities outside the contracting activity responsible for the conduct of the procurement, the head of the office receiving the information, or his or her designee, shall maintain a list of persons, a list of classes of persons and, to the maximum extent practicable, the names of all individuals within classes of persons, who have been authorized access to the proprietary or source selection information. The list shall be forwarded to the contracting office responsible for the conduct of the procurement to be included in the contract file.

- If proprietary or source selection material is released to other than Government employees, the names of those individuals shall also be listed in the contract file.
- The lists delineated above shall be forwarded to the contracting officer for inclusion in the contract file within the time specified by the contracting officer.

Questioning Proprietary Data. Except as provided below, if the contracting officer believes that information marked as proprietary is not proprietary, the competing contractor that has affixed the marking shall be notified in writing and given an opportunity to justify the proprietary marking. If the competing contractor agrees that the material is not proprietary information, or does not respond within the time specified in the notice, the contracting officer may remove the proprietary marking and the information may be released.

After reviewing any justification submitted by the competing contractor, if the contracting officer determines that the proprietary marking is not justified, the contracting officer shall so notify the competing contractor in writing.

(Topic continued on next page)

4.3.2 Restrictions and Prohibited Conduct *(continued)*

Disclosure,
Protection, and
Marking of
Proprietary and
Source Selection
Information
(continued)

Release of Proprietary Data. Information marked by the competing contractor as proprietary shall not be released until:

- The review of the contractor's justification has been completed; or
- The period specified for the contractor's response has elapsed, whichever is earlier.

Thereafter, the contracting officer may release the information.

FAR 27.404(h)

For technical data that are marked proprietary by a competing contractor, the contracting officer shall generally follow the procedures in FAR 27.404(h).

Procurement integrity guidelines do not prohibit competing contractors from disclosing or authorizing the Government to disclose their company-specific proprietary information to any other person or entity where not otherwise prohibited by law.

Proprietary markings do not limit the Government's use of technical data to which the Government has rights.

Prior Disclosure. Source selection or proprietary information that is properly in the possession of a competing contractor as a result of a prior disclosure that was not prohibited shall not be considered to have been solicited or obtained, directly or indirectly, in violation of the Act.

Government Requests for Information. Nothing in the procurement integrity guidelines shall be construed to authorize the withholding of any information pursuant to a proper request from the Congress, any committee or subcommittee thereof, a Federal agency, any board of contract appeals of a Federal agency, the Comptroller General, or an Agency Inspector General, except as otherwise authorized by law or regulation. Any such release which contains proprietary or source selection information shall clearly notify the recipient that the information or portions thereof are proprietary or source selection information related to the conduct of a Federal agency procurement whose disclosure is restricted by the Act.

(continued on next page)

4.3.2 Restrictions and Prohibited Conduct *(continued)*

Restrictions on
Employment or
Business
Opportunity
Discussions

FAR 3.104-6

Applicability to Procurement Officials. During the conduct of an Agency procurement, you, as a procurement official, are prohibited from knowingly, directly or indirectly, soliciting or accepting from or discussing with any officer, employee, representative, agent, or consultant of a competing contractor, future employment or business opportunity. This requirement also applies to you if you are acting as a procurement official for a procuring agency even though you are, or are employed by, a contractor, subcontractor, consultant, expert, or advisor (other than an employee of a competing contractor). The prohibition does not apply to you:

- After the contract has been awarded, the procurement canceled, or the contract modification has been executed;
- After you leave Government service;
- If you are, or are employed by, a contractor, subcontractor, consultant, expert, or advisor, after you cease to act on behalf of, or provide advice to, the procuring agency concerning the procurement;
- If you have received written authorization for recusal from further participation in a procurement, and have in fact discontinued participation in the procurement.
- If your only communication with a competing contractor is for the purpose of:
 - Rejecting an unsolicited offer of employment or business opportunity; or
 - Advising the competing contractor that you must seek recusal in accordance with the act prior to any discussions regarding an unsolicited offer. If you wish to conduct such discussions with the competing contractor, you shall promptly submit a recusal proposal.

(Topic continued on next page)

4.3.2 Restrictions and Prohibited Conduct *(continued)*

Restrictions on
Employment or
Business
Opportunity
Discussions
(continued)

Applicability to Competing Contractors. During the conduct of a Federal agency procurement, competing contractors are prohibited from knowingly, directly or indirectly, offering or promising to, or discussing, with you any future business or employment opportunity. The prohibition does not apply to:

- An initial contact for the sole purpose of determining whether you, or another entity, are able to engage in discussions concerning future employment or business opportunity either because you have been recused or are not a procurement official.
- A contact or discussion with you, or another entity, may engage in such contact or discussion.

Eligibility for Recusal. As a procurement official, you may be eligible for recusal if you have not participated personally and substantially in:

- The evaluation of bids or proposals, the selection of sources, or the conduct of negotiations in connection with solicitation or contract during the period beginning with the issuance of a procurement solicitation and ending with the award of a contract or cancellation of a procurement; or
- The evaluation of a proposed modification, or the conduct of negotiations during the period beginning with the negotiation of a modification of a contract and ending with an agreement to modify the contract or a decision not to modify the contract.

(Topic continued on next page)

4.3.2 Restrictions and Prohibited Conduct *(continued)*

Restrictions on
Employment or
Business
Opportunity
Discussions
(continued)

Recusal Proposal. If you are an eligible procurement official and wish to discuss future employment or business opportunities with a competing contractor during the conduct of a procurement, you must submit to the Head of the Contracting Activity (HCA) (or designee), prior to initiating or engaging in such discussions, a written proposal of disqualification from further participation in the procurement which relates to that competing contractor. Concurrent copies of the written proposal shall be submitted to the contracting officer, the Source Selection Authority if the contracting officer is not the Source Selection Authority, and the procurement official's immediate supervisor. As a minimum, the proposal shall:

- Identify the procurement involved;
- Describe the nature of your participation in the procurement and specify the approximate dates or time period of participation; and
- Identify the competing contractor and describe its interest in the procurement.

Suspension from Participation in a Procurement. The contracting officer, or the Source Selection Authority if the contracting officer is not the Source Selection Authority, may suspend your participation in the procurement pending evaluation of the recusal proposal. Notwithstanding submission of a recusal proposal or suspension from participation in a procurement, you shall not solicit or engage in discussions of employment or business opportunity until authorized in writing by the HCA (or designee).

(Topic continued on next page)

4.3.2 Restrictions and Prohibited Conduct *(continued)*

Restrictions on
Employment or
Business
Opportunity
Discussions
(continued)

Evaluation of Recusal Proposal. If the HCA (or designee) determines that your further participation is not essential to the activity's conduct of the procurement and that recusal will not jeopardize the integrity of the procurement process, the HCA may, after consulting with the agency ethics official, grant written approval of the recusal proposal. In evaluating the recusal proposal, the HCA (or designee) may consider any relevant factors, including:

- The importance of your role to the completion of the procurement action;
- Your prior participation in key procurement decisions and actions;
- The timing of the proposal in relation to significant procurement milestones; and
- Potential disruption to the procurement schedule as a result of your recusal.

The HCA (or designee) may request that any person, including you, the Source Selection Authority, the contracting officer, or your immediate supervisor, provide any additional information necessary to evaluate the recusal proposal.

Any rejection of the recusal proposal must be in writing and shall state the basis for rejection. A determination by the HCA (or designee) to reject a recusal proposal shall be final. Rejection of your recusal proposal shall not be deemed to be an adverse personnel action or be subject to agency or negotiated grievance procedures.

Duration of Recusal. If your recusal proposal is approved, you shall be disqualified:

- As a minimum, for any period during which future employment or business opportunities with the competing contractor have not been rejected by either you or the competing contractor; or
- For the period that you and the competing contractor have an employment or business relationship or an arrangement concerning future employment or business relationships.

(continued on next page)

4.3.2 Restrictions and Prohibited Conduct *(continued)*

Restrictions on
Employment or
Business
Opportunity
Discussions
(continued)

Reinstatement to Participation in a Procurement. Subsequent to a period of disqualification, if an agency wishes to reinstate you to participation in the procurement, the HCA (or designee) may authorize immediate reinstatement or he/she may authorize reinstatement following whatever additional period of disqualification is deemed necessary to ensure the integrity of the procurement process. It is within the discretion of the HCA (or designee) to determine that you shall not be reinstated to participation in the procurement. In determining that any additional period of disqualification is necessary, the HCA (or designee) shall consider any factors that might give rise to an appearance that you acted without complete impartiality with respect to issues involved in the procurement.

Post-Employment
Restrictions and
Certifications from
Procurement
Officials.

FAR 3.104-7

Certification. If you are a procurement official and leave the Government during the conduct of a procurement expected to result in a contract or modification in excess of \$100,000, you must certify to the contracting officer that you understand your continuing obligation, during the conduct of the procurement, not to disclose propriety or source selection information related to the procurement. This certification requirement applies even if you are, or are employed by, a contractor, subcontractor, consultant, expert, or advisor (other than the competing contractor) when you, during the conduct of the procurement, cease to function as a procurement official for the procurement.

Negotiation Participation. As a former Government officer or employee, who was a procurement official with respect to a particular procurement, you are restricted from knowingly participating in any manner in negotiations as an officer, employee, representative, agent, or consultant of a competing contractor leading to the award or modification of the contract for such procurement. This restriction not only includes representing the competing contractor in negotiations with the contracting activity, but also includes providing advice or information for the specific purpose of influencing negotiation strategies. For purposes of this restriction, the term “negotiation strategies” means the contractor’s approach to the preparation and presentation of its offer or the conduct of negotiations with the Government. This restriction does not apply to providing scientific, technical, or other advice that is unrelated to negotiation strategies. This restriction lasts for 2 years from the date of your last personal and substantial participation in the particular procurement.

(Topic continued on next page)

4.3.2 Restrictions and Prohibited Conduct *(continued)*

Post-Employment
Restrictions and
Certifications from
Procurement
Officials.
(continued)

Performance Participation. As a current or former Government officer or employee, who was a procurement official with respect to a particular procurement, you will be restricted from knowingly participating personally and substantially on behalf of the competing contractor in performance of the contract. To participate personally and substantially requires the presence of both direct and significant involvement in the performance of the specific contract. The performance of general engineering, scientific or technical work, or providing general budgetary or policy advice, shall not be considered personal and substantial participation on behalf of a competing contractor in the performance of the contract for which you were a procurement official. Where participation is on behalf of a competing contractor who is a subcontractor, the significance of that participation will be determined in relation to the prime contract. This restriction lasts for 2 years from the date of the last personal and substantial participation in the Federal agency procurement.

The restrictions (in the two paragraphs immediately above) against your participation (as a former procurement official) with the contractor do not apply to:

- If you were employed as, a contractor, subcontractor, consultant, expert, or advisor and you were not a Government officer or employee as defined in FAR 3.104-4(d).
- Your participation in the negotiation or performance of any other contract of the competing contractor.
- You are performing general scientific and technical work on an independent research and development project, unless such work involves the negotiation or performance of a specific contract that you worked on as a Government employee.
- Your participation with respect to a subcontractor who is a competing contractor unless:
 - The subcontractor is a first or second tier subcontractor and the subcontract is for an amount that is in excess of \$100,000; or
 - The subcontractor significantly assisted the prime contractor with respect to negotiation of the prime contract; or

(Topic continued on next page)

4.3.2 Restrictions and Prohibited Conduct *(continued)*

Post-Employment
Restrictions and
Certifications from
Procurement
Officials.
(continued)

- You personally directed or recommended the particular subcontractor as a source for the subcontract; or
 - You personally reviewed and approved the award or modification of the subcontract. A contracting officer's consent, in accordance with FAR Part 44, to the placement of a subcontract or, with respect to architect-engineer contracts, the substitution of a subcontractor, associate, or consultant, does not constitute approval of the subcontract, subcontractor, associate, or consultant. Similarly, approval of a contractor's purchasing system does not constitute approval of a particular subcontract or subcontractor.
- You have been granted a waiver by the President. Presidential waivers may be granted only to a civilian officer or employee of the Executive branch other than an officer and employee in the Executive Office of the President who, after his or her Federal Government employment is terminated, is or will be engaged in activities at a Government-owned, contractor-operated entity at which he or she served as an officer or employee immediately before his or her Federal Government employment began.
 - Your only personal and substantial participation in the procurement occurred during the period December 1, 1989, through May 31, 1991.
-

Knowing
Procurement
Integrity
Violations

FAR 3.104-8(a)

Neither you, acting as a procurement official, nor a competing contractor violates the procurement integrity guidelines unless the prohibited conduct is engaged in knowingly. Conduct is not "knowing" when:

- A competing contractor engages in specific conduct after having satisfied the duty to inquire or when the competing contractor engages in conduct based upon good faith reliance on an agency ethics advisory opinion issued to a current or former procurement official.
 - You, as a procurement official, engage in specific conduct after having satisfied your duty to inquire or have acted in good faith reliance on an ethics advisory opinion.
-

(continued on next page)

4.3.2 Restrictions and Prohibited Conduct *(continued)*

General Duty to Inquire About Status

FAR 3.104-8(b)

For some procurements, neither competing contractors nor all procurement officials will have knowledge as to when the conduct of a particular procurement has begun. However, certain conduct and activities prohibited by the Act would be inappropriate at any time. There are prohibitions on the receipt of gratuities from agency contractors that apply without regard to whether you are involved in the conduct of a particular procurement. Similarly, potential contractors should not solicit, and you should not offer, proprietary or source selection information at any time. However, potential contractors may offer, and you may solicit, employment except as prohibited by law.

You are presumed to know the procurements for which you are a procurement official. Contractor personnel are presumed to know the procurements for which the organization they represent is reasonably likely to be competing. Individuals who do not know whether they are procurement officials, or whether the organization they represent is or is reasonably likely to become a competing contractor, should defer any discussions regarding employment until these questions are resolved by consulting appropriate parties within their respective organizations. If you cannot ascertain, after discussions with the contracting officer or the Source Selection Authority (if the contracting officer is not the Source Selection Authority), whether you are a procurement official, you may request an ethics advisory opinion from your Agency Ethics Official.

Duty to Inquire About Status Prior to Employment Discussions

FAR 3.104-8(c)

Competing Contractor. If a contractor wishes to discuss employment opportunities with you and your duties and functions may make you a procurement official, the contractor should ask if you are a procurement official for a procurement for which the contractor is a competing contractor or is likely to become a competing contractor before conducting any discussion related to employment. A competing contractor shall not be considered to have knowingly violated integrity prohibitions if the contractor has made an inquiry of you in good faith and has been advised that you are not a procurement official for any procurement for which the contractor is or is reasonably likely to become a competing contractor, or is advised that you have been recused from participation in the procurement.

(Topic continued on next page)

4.3.2 Restrictions and Prohibited Conduct *(continued)*

Duty to Inquire
About Status Prior
to Employment
Discussions
(continued)

Procurement Official. You, as a procurement official, may not solicit or engage in employment or business opportunity discussions with a competing contractor or a contractor who is reasonably likely to become a competing contractor unless you have been recused from participation in the procurement.

If you wish to solicit employment from, or discuss employment with, a contractor and you do not know if the contractor is or is reasonably likely to become a competing contractor you should ask the contractor. You:

- May rely on the contractor's representation that it is not or is not likely to become a competing contractor, and enter into employment or business opportunity discussions with that contractor; or
- Shall not, if the contractor represents that it is or is reasonably likely to become a competing contractor, enter into employment or business opportunity discussions with that contractor. If you are an eligible procurement official and desire to pursue discussions with that contractor, you must first seek and obtain written authorization for recusal before entering into further discussions with that contractor.

You shall not be considered to have knowingly violated the prohibitions of the Act if:

- You have made inquiry in good faith of the potential contractor, and have been advised that the contractor is not or will not be a competing contractor on a procurement under your responsibility; or
 - You have been recused from participation in the procurement.
-

(continued on next page)

4.3.2 Restrictions and Prohibited Conduct *(continued)*

Duty to Inquire
Prior to Soliciting
or Disclosing
Information

FAR 3.104-8(d)

Competing Contractor. A competing contractor shall not be considered to have knowingly violated the prohibitions against soliciting or obtaining proprietary source selection information if, before the proprietary or source selection information was solicited or obtained, the contractor:

- Had made an inquiry in good faith of the contracting officer, or if a contracting officer has not been appointed, the Agency Head (or designee), regarding whether information was proprietary or source selection information; and
- Had been advised by such official that the information was not proprietary or source selection information.

Procurement Official. You, as a procurement official, shall not be considered to have knowingly violated the prohibitions against disclosing proprietary or source selection information if, prior to disclosing information, you had made an inquiry in good faith of the contracting officer, or if a contracting officer has not been appointed, the Agency Head (or designee) and had been advised that:

- The information was not proprietary or source selection information; or
- The information is proprietary or source selection information and the individual to whom you wish to disclose the information has been authorized access to such information by the Agency Head or the contracting officer.

Any Person. No person who is given authorized or unauthorized access to proprietary or source selection information shall be considered to have knowingly disclosed such information to an unauthorized person if, before disclosing such information, the person:

- Had made an inquiry in good faith of the contracting officer, or if a contracting officer has not been appointed, the Agency Head (or designee) as to whether or not the individual to whom he seeks to disclose the proprietary or source selection information has been authorized access to such information by the Agency Head or the contracting officer; and
- Had been advised by such official that such individual has been so authorized.

(continued on next page)

4.3.2 Restrictions and Prohibited Conduct *(continued)*

Ethics Advisory
Opinions

FAR 3.104-8(e)

As an employee or former employee of an agency who is or was a procurement official, you may request an ethics advisory opinion from the Agency Ethics Official as to whether specific conduct which has not yet occurred would violate the Act. If you cannot determine, after discussions with the contracting officer, whether you are or were a procurement official, you may request an ethics advisory opinion for the purpose of determining your status. However, you may not obtain an ethics advisory opinion for the purpose of establishing whether:

- Prior to bid opening or receipt of proposals, a particular contractor is a competing contractor (Questions regarding a contractor's status as a competing contractor shall be resolved with the contractor.);
- Items of information constitute proprietary or source selection information (Questions regarding proprietary and source selection information must be referred to the contracting officer or, if a contracting officer has not been appointed, the Agency Head (or designee).); or
- Proprietary or source selection information may be disclosed.

Request for Advisory Opinion. Any request for an advisory opinion shall be submitted in writing, shall be dated and signed, and shall include all information reasonably available to you that is relevant to the inquiry. As a minimum, the request shall include:

- Information about the procurement in which you were or are involved, including contract or solicitation numbers, dates of solicitation or award, and a description of the goods or services procured or to be procured;
- Information about your participation in the procurement, including the dates or time periods of that participation, and the nature of your duties or responsibilities;
- Information about the competing contractor who would be a party to the proposed conduct, and the nature of the competing contractor's interest in the procurement;

(Topic continued on next page)

4.3.2 Restrictions and Prohibited Conduct *(continued)*

Ethics Advisory Opinions (continued)

- A description of the possible gratuity or other thing of value if the request concerns a violation of the prohibition against acceptance. If you request an advisory opinion, you are responsible for furnishing an appraisal or good faith estimate of market value where the value of an item is in question;
- Specific information about the particular duties to be performed on behalf of the competing contractor if the request concerns conduct that might violate the prohibitions against participating with a competing contractor/subcontractor on a contract for which you were a procurement official. Where the issue concerns whether employment with a subcontractor is permissible, the request shall include information about the subcontract level and dollar amount, the subcontractor's role in assisting the prime contractor in negotiating the prime contract, and your role in directing or recommending the subcontractor to the prime contractor as a source for the subcontract or reviewing and approving the award or modification of the subcontract.

Opinion on Proposed Conduct. Within 30 days after the date a request containing complete information is received, or as soon thereafter as practicable, the Agency Ethics Official shall issue an opinion as to whether proposed conduct is proper or would violate the Act.

- Where complete information is not included in the request, the Agency Ethics Official may ask you to provide any information reasonably available to you, and the 30-day period will run from the date that additional information is received. The ethics official may also request additional information from other persons, including the Source Selection Authority, the contracting officer, or your immediate supervisor.
- Where the opinion cannot be issued within 30 days, the reason for the delay will be documented in the file. Acceptable reasons for delay include, but are not limited to, the necessity for the agency ethics official to independently develop information not reasonably available to you, or to verify questionable information that you furnished.
- In issuing an opinion, the agency ethics official may rely upon the accuracy of information furnished by the requester or other agency sources, unless the official has reason to believe that the information is fraudulent, misleading, or otherwise incorrect.

(Topic continued on next page)

4.3.2 Restrictions and Prohibited Conduct *(continued)*

Ethics Advisory
Opinions
(continued)

File Documentation. A copy of each request and ethics advisory opinion shall be retained for a period of 6 years. Agencies shall not provide copies of the advisory opinions to any person other than the requester, except with the express authorization of the requester or where release is otherwise permitted by law.

Reliance on the Opinion. Where you engage in conduct in good faith reliance upon an ethics advisory opinion, or a competing contractor engages in conduct based upon good faith reliance on the ethics advisory opinion, neither you nor the competing contractor shall be found to have knowingly violated the restriction at issue. However, where you or the competing contractor has actual knowledge or reason to believe that the opinion is based upon fraudulent, misleading, or otherwise incorrect information provided by the requester, reliance upon the opinion will not be deemed to be in good faith.

Certification
Requirements

FAR 3.104-9

The Act requires certifications, prior to the award of a Federal agency contract or contract modification in excess of \$100,000, by the officer or employee of the contractor responsible for the offer or bid for that particular contract or contract modification for property or services, and by the contracting officer for that procurement.

Competing Contractor Certification. Except as provided in FAR 3.104-9(f), contracting officers shall require the competing contractor to:

- Certify in writing that, to the best of his/her knowledge and belief, such officer or employee of the competing contractor has no information concerning a violation or possible violation of the Act as implemented in the FAR;
- Disclose any and all such information, and certify in writing that any and all such information has been disclosed; and

(Topic continued on next page)

4.3.2 Restrictions and Prohibited Conduct *(continued)*

Certification Requirements (continued)

- Certify in writing, to the best of his/her knowledge and belief, each officer, employee, agent, representative, and consultant of such competing contractor who has participated personally and substantially in the preparation or submission of such bid or offer, or in a modification of a contract, as the case may be, has certified in writing to such competing contractor that he/she:
 - Is familiar with, and will comply with, the requirements of the Act as implemented in the FAR; and
 - Will report immediately to the officer or employee of the competing contractor responsible for the offer or bid for any contract or the modification of a contract, as the case may be, any information concerning a violation or possible violation of the Act, as implemented in the FAR.

Subcontractors are not required to submit the certificate required by the Act. However, nothing in the Act or FAR precludes a competing contractor from requesting certifications from its subcontractors.

FAR 3.104-9(b)(3)

Specific certificate submission requirements are contained in FAR 3.104-9(b)(3).

Contracting Officer Certifications. A Federal agency may not award a contract for the procurement of property or services, or agree to a modification of any contract, if the contract or contract modification exceeds \$100,000, unless the contracting officer responsible for such procurement:

- Certifies in writing to the head of such agency that, to the best of his/her knowledge and belief, the contracting officer has no information concerning a violation or possible violation of the Act, as implemented in the FAR, pertaining to such procurement; or
- Discloses to the Agency Head any and all such information and certifies in writing that any and all such information has been disclosed.

Additional Certifications. Additional certifications may be required in accordance with FAR 3.104-9(c).

(Topic continued on next page)

4.3.2 Restrictions and Prohibited Conduct *(continued)*

Certification
Requirements
(continued)

FAR 3.104-9(e)(2) and (3)

Record Keeping Requirements. The contracting officer shall assure that all the files for contracts in excess of \$100,000 contain the documents required by the above guidance. Other related records (e.g., ethics advisory opinions) shall be retained as required in FAR 3.104-9(e)(2) and (3).

Exceptions to Certification Requirements. Certification requirements do not apply:

- To contracts with a foreign government or an international organization that are not required to be awarded using competitive procedures; or
 - When the Agency Head determines in writing that the certification requirement should be waived. The Agency Head shall promptly notify Congress in writing of each waiver approved. Situations where a waiver may be appropriate include situations:
 - Where prices are set by law or regulation;
 - Where terms and conditions of a contract are specified by an agreement with a foreign government or governments;
 - Where supplies or services are provided by foreign nationals to United States facilities overseas for use outside the United States;
 - Where a foreign government specifies a particular U.S. contractor to satisfy its requirements.
-

(continued on next page)

4.3.2 Restrictions and Prohibited Conduct *(continued)*

Processing
Violations or
Possible
Violations

FAR 3.104-11

If the contracting officer makes or receives a disclosure or otherwise receives or obtains information of a violation or possible violation of the Act, the contracting officer shall determine whether the reported violation or possible violation has any impact on the pending award or selection of the source therefore.

- If the contracting officer concludes that there is no impact on the procurement, the contracting officer shall forward the information concerning the violation or possible violation, accompanied by appropriate documentation supporting that conclusion, to an individual designated in accordance with agency procedures.
 - With the concurrence of that individual, the contracting officer shall, without further approval, proceed with the procurement. The individual concurring with that conclusion shall forward all information relating to the violation or possible violation to the HCA (or designee), to satisfy the disclosure requirements of the Act.
 - If the individual reviewing the contracting officer's conclusion does not agree with that conclusion, he or she shall advise the contracting officer to withhold award and shall promptly forward the information and documentation to the HCA (or designee).

FAR 3.104-9

- If the contracting officer determines that the violation or possible violation impacts the procurement, the contracting officer shall promptly forward the information to the HCA or his or her designee. Procedures for HCA review and response are delineated in FAR 3.104-9.
-

SUMMARY

In this chapter, you learned about the ethics issues concerning FIP resources acquisition. In the next chapter, you will learn about the system life cycle.

CHAPTER 5

THE SYSTEM LIFE CYCLE

Chapter Vignette

“Another thing that concerns me,” said Mark, “is how long will a FIP resource last. I mean, even if we buy the latest and greatest, how long will it last?”

“Well,” said Marcia, “I think your concern here has to do with more than just obsolescence. You are right, even if we acquire the latest technology, we must consider the useful life of the acquisition. What you are talking about now is the system life cycle. The life cycle for a FIP resource is similar, in some ways, to the life cycle for any system, starting with the original requirement and proceeding through phase out and disposal. However, there are some important differences between FIP resources and other system life cycles. Let’s take a look.”

Course Learning Objectives

At the end of this chapter, you will be able to:

Overall:

Summarize the concept of systems life cycle and any unique differences in the area of FIP resources acquisition.

Individual:

5. 1 Define the concept of a “system life cycle” in relation to the acquisition life cycle
5. 2 Identify the various steps in the system life cycle and explain some of the activities that occur within each phase of the life cycle.
5. 3 Illustrate the difference between a major automated information system life cycle and other life cycles (such as a weapon system).

Chapter Overview

Scope

This chapter discusses the concept of the system life cycle. In the acquisition of a FIP resource you must understand that the acquisition and the associated “up front” costs are only a part of the system life cycle, which includes certain phases, activities and decisions. For example, a FIP resource may have eight to ten years of useful life, during which there may be many additional costs for operations, maintenance, upgrades and finally, for removing the resource from service and scrapping it.

You can see that if you considered only the initial acquisition cost, you would be underestimating the total cost to the Government. *For this reason, you should always consider system life cycle costs in acquisition of FIP resources.*

Some non-durable commodities, such as office supplies, have only a very short life cycle. They are simply purchased, used up and then disposed of with little effort. There are no long term costs, such as upgrades, training, maintenance or special disposal costs to consider.

On the other hand, the Government buys some durable commodities, such as ships and aircraft, which may have very long system life cycles (more than 30 years) and where the system life costs such as training, maintenance, upgrades and disposal are critical because they are such a large part of the total system life cycle cost of the commodity.

As a general rule, you can expect that the system life cycle for a FIP resource will be only about eight years. After that time, the FIP item will be outdated or obsolete, *although it may continue in useful service.* During the life cycle, the FIP resource (such as a computer) may receive several upgrades, require training of personnel, require maintenance and eventually require considerable disposal costs associated with scrapping.

All of these associated costs are part of the total system life cycle cost of the FIP acquisition, above and beyond the actual acquisition or “up front” cost, and you must consider these total costs in the acquisition planning.

(continued on next page)

Chapter Overview *(continued)*

Topics Covered in this Chapter

The major topics covered in this chapter are:

SECTION	TITLE	PAGE
5. 1	Concept of the System Life Cycle	5-5
5. 2	Phases and Activities in the System Life Cycle	5-11
5. 3	Difference between Major Automated Information System Life Cycle and Other Life Cycles (Major Weapon Systems)	5-19

References

In order to understand the concept of the system life cycle, you should have access to the following references:

- FIRMR Part 201-4.001 and 201-20.103-2; and
 - DoD 8000 Series directives (for DoD FIP resource acquisitions).
-

5.1 Concept of the System Life Cycle

Key Concepts

In order to fully understand the objectives in this chapter, you must understand the three following concepts:

- System Life;
- Lowest Overall Cost; and
- Most Advantageous Alternative.

Concept of System Life Cycle

First, you must understand the concept of the *system life*, as that concept applies to the acquisition of FIP resources. Too often, when procuring FIP resources or other expensive commodities, it is easy to focus only on the initial acquisition cost (the “up front cost,”) and neglect the total cost of the acquired system over its life.

The problem is that if you consider only the initial or acquisition cost, you risk overlooking many related costs. The costs of conversion, retraining on a new system, maintenance and eventual disposal are all true system costs which should be considered in a FIP resource acquisition, because they can be quite significant.

Example. Two competing FIP systems may have the same acquisition cost, but one may be very expensive to maintain, or require high training costs over a maximum of eight year expected life. It would not be accurate to compare the costs of both systems based on acquisition cost alone. In fact, the cheaper system (acquisition cost) might have a much more expensive overall cost and be a less attractive overall buy. However, you could not know this unless you compared the respective life cycle costs of the two systems.

FIRMR 201-20.103-3

For this reason. FIRMR 201-20.103-2 requires that agencies establish a system life as a part of the requirements analysis.

(Note—for a more detailed discussion of the Requirements Analysis, see Chapters 21, 22, and 24.)

(continued on next page)

5.1 Concept of the System Life Cycle *(continued)*

Definition of System Life

FIRMR 201-4.001 explains that system life means “*a projection of the time period that begins with the installation of the FIP resources and ends when the agency’s need for that resource has terminated.*”

You can see that the total cost of a system for that period of time (from installation until the item is scrapped or otherwise disposed of) can be much greater than the mere acquisition cost.

Remember, most FIP resources are expected to last no more than seven or eight years. During that time, there may be significant support and maintenance costs. For this reason, it is not very useful to merely consider acquisition costs. Rather, it is more useful to consider the *lowest overall costs over the life of the system, from installation to disposal.*

Definition of Lowest Overall Cost

The second key concept is “lowest overall cost.” FIRMR 201-4.001 defines lowest overall cost as:

“the expenditure of funds over the system life, price and other factors considered, including, but not necessarily limited to:

- prices for the FIP resources;
- the present value adjustment (if used); and
- the identifiable and variable costs:
 - directly related to the acquisition and use of the FIP resources;
 - of conducting the contract action; and
 - of other administrative efforts directly related to the acquisition process.”

You can see that, unless you consider system life, you cannot estimate lowest overall cost, and unless you estimate the lowest overall cost, you may not select the “most advantageous alternative.”

(continued on next page)

5.1 Concept of the System Life Cycle *(continued)*

Most Advantageous Alternative

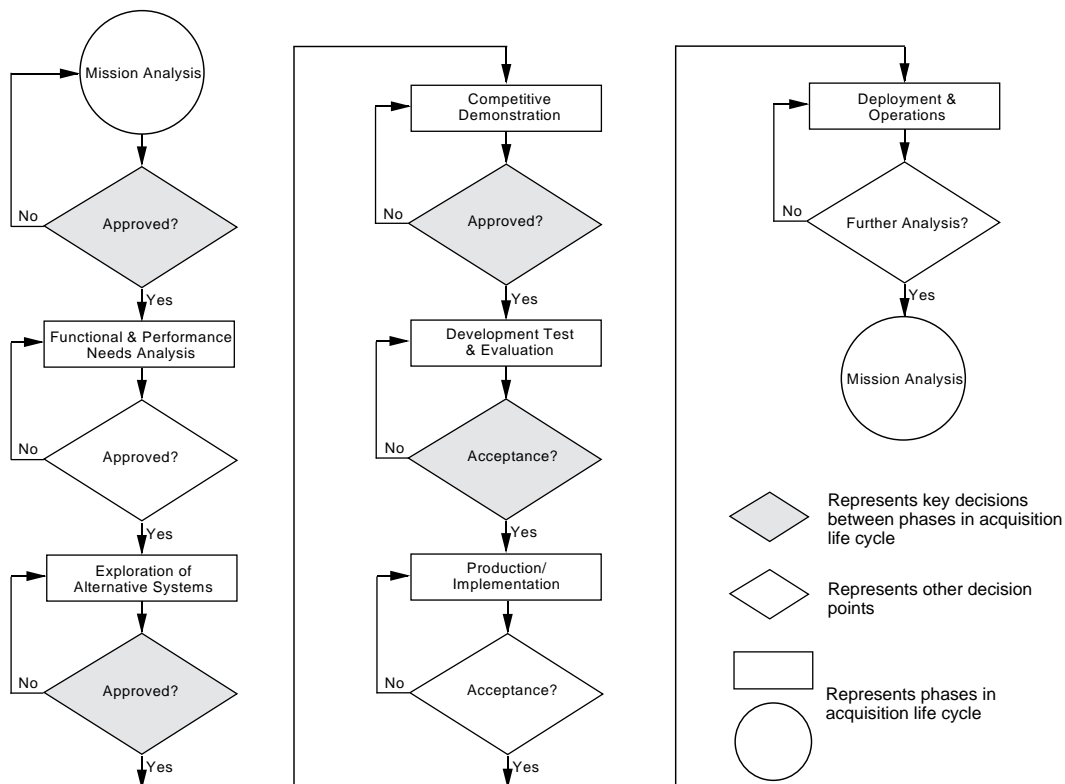
A third key concept is the “most advantageous alternative. “ As you probably already know, the most advantageous alternative is defined as *“the alternative that provides the greatest value to the Government over the system life in terms of price or cost, quality, performance, and any other relevant factors”* (FIRMR 201-4.001). This may include precious metal recovery and environmentally hazardous material disposition .

Therefore, you can see that, unless you consider the costs over the system life, you cannot accurately estimate lowest overall costs, and unless you estimate lowest overall cost, you will not have a basis to select the most advantageous alternative.

OMB Circular A-109

You will recall that Chapter 2 (“OMB Circulars That Apply to Acquisition of FIP Resources”) discussed A-109 (Major Systems Acquisitions). A-109 explains the major decision points leading to the **deployment** (installation) of the FIP resource.

In the following flowchart, system life begins when the FIP resource is installed in the using agency, during “Deployment and Operations.”



(continued on next page)

5.1 Concept of the System Life Cycle *(continued)*

Decisions During the System Life Cycle

Of course, soon after the FIP resource (such as a computer or telecommunications system) is installed, the program staff will begin to make plans, analyses and studies to determine if the system should be upgraded or modified, as agency needs, missions and available technology all change.

Note that the FIRMR requires almost continuous planning of this kind. So, for example, if FIP maintenance costs become too great, or if newer technology promises to be more cost-effective, the program staff might conclude that the installed FIP resource should be scrapped and a newer resource acquired. This can happen at any time in the FIP resource system life cycle, but is more frequent later in the system life. Throughout the system life cycle, the three alternatives are:

1. Retain the FIP resource “as is;”
 2. Retain the FIP resource, but modify or upgrade with new technology; or
 3. Dispose of the FIP resource and acquire a newer FIP resource.
-

Length of System Life

Most FIP resources, such as computers and printers, have a useful system life of only a few years. After eight years, they are usually outdated or obsolete, although they may still be of some use to the agency, or to other agencies, without modifications and upgrades.

Technology Insertion

Of course, it is possible to continually modify a FIP resource, such as a computer, through technology insertion, by continually or periodically adding new technology to increase capability and performance.

You may even add a *technology insertion clause* to a contract to require a contractor to periodically add new technology to an acquired FIP system. This can delay obsolescence for years. For example, you can add newer, faster, larger disk drives or accelerators to a desktop computer to delay obsolescence. However, at some point, it is no longer cost effective to rely on technology insertion or upgrades to keep an older system in service.

(continued on next page)

5.1 Concept of the System Life Cycle *(continued)*

DOD Experience With System Life Costs

The concept of system life costs became very important in the Department of Defense when acquiring weapon systems that cost billions of dollars. It became apparent that the acquisition cost alone was not a very good measure of the overall cost for such items as airplanes or ships. Many other costs, such as operating costs (fuel consumption, spare parts, etc.) had to be considered in order to arrive at a truer “system life cycle” cost.

For example, a Navy ship might have a 25 year expected life. During that 25 year period, the Government would pay for the original ship construction, the costs of operation (fuel, crew, supplies and equipment), several major overhauls and modifications and, finally, the scrapping of the ship.

System Life– Applicability to FIP Resources

Many principles for system life costs applied to very large defense procurements can also be applied to FIP resource acquisitions and other commodities.

For example, suppose you are researching costs for a color printer. You select color printer “A” that costs five thousand dollars to purchase, compared to another color printer “B” that costs seven thousand dollars. It appears that you have saved the Government two thousand dollars in acquisition costs.

However, over the first five years of life for both printers, you may find that the cheaper printer is much slower (less efficient), costs more to operate, and breaks down more often (low availability rate). If this were the case, the true cost of the printers might look more like the table on the next page.

(continued on next page)

5.1 Concept of the System Life Cycle *(continued)*

Example of True Costs

COMPARATIVE LIFE CYCLE COSTS - COLOR PRINTERS					
Model	Purchase Price	Operating Cost	Availability Rate	First Year Cost	Five Year Cost
"A"	\$5,000	\$1,500/year	97%	\$6,500	\$12,500
"B"	\$7,000	\$1,000/year	99%	\$8,000	\$12,000

You can see in this hypothetical case that, although printer "A" is cheaper to buy, it costs more to operate each year than printer "B" and that after the first five years, it actually costs more. You can also see that if the life cycle were longer than five years, the difference would constantly get larger, by \$500 per year.

So, if the life cycle were extended to ten years, instead of five years, the system life cost for printer "A" would be \$20,000 and for printer "B" the cost would be only \$17,000. Therefore, after just five years, the ***lowest overall cost*** would be provided by printer "B."

Now, instead of just one printer, if you had bought 500 for your agency, the cost difference would be quite large ($500 \times \$3,000 = \$1,500,000$).

So, if you consider system life cost, rather than purchase price alone, printer "A" does not seem to be such a bargain. This is why you must consider life cycle costs in FIP acquisitions, and not merely the purchase price.

5.2 Phases and Activities in the System Life Cycle

Phases and Steps in the System Life Cycle

Today, the concept of life cycle costs is well established and used in many large scale Government acquisitions, including FIP resource acquisitions.

At first, the concept of the system life cycle can appear to be very complex, but you can easily master it when you break the system life cycle down into the phases and steps.

You can see that the table on the following page breaks the acquisition life cycle concept down into the five phases, each with several steps.

You will also see that the system life cycle phases correspond to certain phases in the acquisition cycle. **DO NOT CONFUSE THE TWO!** Although they sound alike and are closely related, they are not the same.

Relationship of System Life Cycle and Acquisition Life Cycle

The table on the following page shows the relationship between the acquisition life cycle and the system life cycle. Note that the acquisition life cycle starts much earlier, with the planning phase but ends at the same time as the system life cycle. *The system life cycle begins with the installation and also ends with the disposition of the FIP resource.*

System Life Cycle Phases and Activities

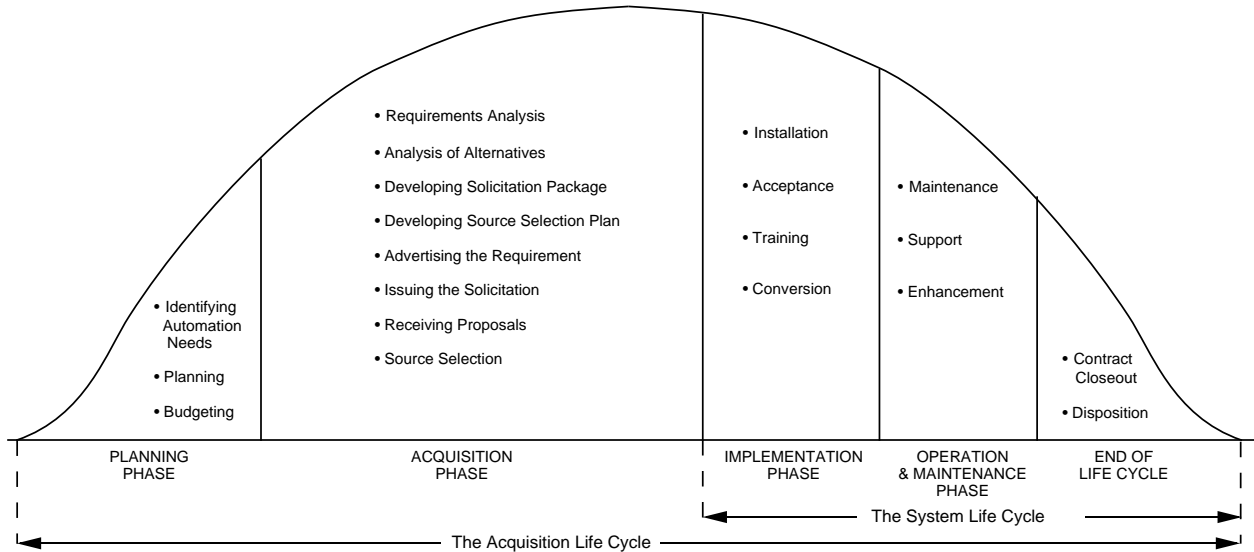
Remember that the *system life of a FIP resource begins with the installation* of the resource, continues throughout the useful life of the resource and ends when the FIP resource reaches the end of its useful life in the agency. At that time, the resource may be scrapped or turned over to another agency (where it may begin a new system life cycle).

The system life cycle consists of several phases, each with several stages called “steps” (Do not confuse these “steps” with the steps you yourself perform in procedures set out in this text. In a system life cycle, you do NOT perform all of these “steps.”) There are certain activities that you should expect in each phase. The following graphic shows the phases and “steps” of the system life cycle.

(continued on next page)

5.2 Phases and Activities in the System Life Cycle *(continued)*

System Life Cycle Phases and Activities



Implementation Phases and “Steps”

You can see that the system life cycle is much shorter than the acquisition cycle. It begins with the Implementation phase, which includes installation, acceptance, training and conversion.

“Step” 1—Installation. *Installation* consists of complete set-up and integration of the new FIP resource at the Government’s facility. This may be done by the vendor of the hardware and/or software, or by a team of contractors under the direction of an integrating contractor (systems integrator) who did not manufacture any of the equipment. Installation usually includes a period of preliminary testing, to ensure that hardware and software operate as planned.

During this step, any necessary changes to support the new FIP resource will also be made to the physical facility. For example, cable outlets and air conditioning may be upgraded to accommodate a large new computer system.

(Topic continued on next page)

5.2 Phases and Activities in the System Life Cycle *(continued)*

Implementation
Phase and “Steps”
(continued)

“Step” 1—Installation. *(continued)* As a contract specialist or contracting officer, you will usually not be heavily involved in this step, except to ensure that contract requirements, such as installation dates, are met by the contractor. Of course, the COTR and technical personnel should closely monitor the installation and report any problems to the contracting office.

“Step” 2—Acceptance. During *Acceptance*, the Government and the contractor will conduct those tests, demonstrations, and certifications that were specified for validation of contractor claims in the Test Plan or the Validation Plan. (You will recall that the Test Plan or Validation Plan should have been part of the Acquisition Plan and should have been included in the solicitation to alert offerors of acceptance criteria.)

During acceptance, the contractor may *certify compliance* with performance and capability standards and requirements, or *conduct demonstrations*, using either contractor personnel, or using Government personnel. Or, the Government may conduct *analytic modeling* or use a combination of techniques to validate that the FIP hardware and/or software actually perform in accordance with the specifications and requirements.

Note that during acceptance, the agency’s normal work load is usually NOT placed completely on the new FIP resource. This is because if there is a system failure, valuable or sensitive files could be lost. So, during acceptance, the agency’s normal work load usually continues on older equipment. Usually, only duplicate or simulated work load is used for acceptance testing.

During acceptance, Government technical personnel, especially the COTR, will closely monitor results. As a contract specialist or contracting officer, you will want frequent progress reports to ensure that contract milestones are met. Of course, you will not generally authorize payment until acceptance is completed and the results are accepted by the Government.

(Topic continued on next page)

5.2 Phases and Activities in the System Life Cycle *(continued)*

Implementation
Phase and “Steps”
(continued)

“Step” 3—Training. Once Acceptance has been successfully completed, the next step is usually *Training*. In this step, the Government work force is trained to use the new FIP resource. The training may be conducted either by the contractor or by Government personnel who were previously trained by the contractor. The training may either be on-site at the Government’s facility or at the contractor’s facility or both.

Emphasize Performance-Based Competency. The acquisition plan should emphasize *performance-based competency*, to ensure that each of the Government personnel can operate the equipment, during “hands on” tests, rather than pencil and paper-based tests of knowledge about the FIP resource.

It is critical to ensure that all Government personnel who are designated to operate or maintain the equipment receive and pass this training. If necessary, remedial training and testing should be scheduled until all designated personnel can achieve the performance-based competencies, rather than merely sitting through a number of hours of training.

As a contract specialist or contracting officer, you will normally receive reports on the progress of training from the COTR to ensure that contractual requirements and milestones are met.

“Step” 4—Conversion. The last step in the implementation phase of system life is *Conversion*. During conversion, the agency converts its regular work-load from older FIP resources (or manual systems) to the new FIP resource.

In order to ensure safety of the files, the agency may run *duplicate or parallel operations* for a time on old and new FIP resources, such as computer systems, until satisfied that the new FIP resource is operating properly with the files.

Conversion is not a one day event, but a transition period and may last months and even years on a very large acquisition. Finally, when certain that data will not be lost on the new FIP resource, the older FIP resource or system is phased out. The older FIP resource may be disposed (ending its life cycle), or transferred to another office or agency (to begin a new life cycle after installation there).

As a contract specialist or contracting officer, you will not usually be very involved in conversion, unless it one of the contractor’s tasks.

5.2 Phases and Activities in the System Life Cycle *(continued)*

Operation and Maintenance Phase

The *operation and maintenance phase* of the system life cycle is next. It includes *maintenance, support and enhancement*. During each of these steps in the system life, you may have a contract in force with the original contractor, or contract out for FIP services and support services.

“Step” 5—Maintenance. Maintenance continues throughout the operation and maintenance phase of the system life. Maintenance is a subset of FIP support service and may include preventive maintenance, servicing and minor and major removal and repairs, diagnostics and troubleshooting of system components.

Maintenance may be done either by the OEM or by another contractor and may be performed on-site or at the contractor’s facility. (Note - for a detailed discussion of maintenance, see Chapter 9, “Acquiring of Maintenance Services.”)

Performance of maintenance should be closely monitored by the COTR. As a contract specialist or contracting officer, you may be very involved in contracting for such services, and administering the contract(s).

“Step” 6—Support. The next step in the operation and maintenance phase of the system life cycle is *Support*. Support can include a wide variety of activities. For example, after the new FIP resource is in operation, the agency may require a contractor to take over the day to day operation and refresher training, do analyses and studies of work flow, propose improvements or provide many other types of services. This can happen any time over the several years of the expected system life.

As a contract specialist or contracting officer, you may be deeply involved in administering contract actions for support or in letting new support contracts for support of installed FIP resources.

“Step” 7—Enhancement. The last step in the Operation and Maintenance phase of the system life is *Enhancement*. You will recall that a FIP resource usually has a maximum useful life of about eight years. During that time, there will almost certainly be many improvements or enhancements in the technology. For example, there may be major upgrades in computer software every 12-18 months.

(Topic continued on next page)

5.2 Phases and Activities in the System Life Cycle *(continued)*

Operation and
Maintenance
Phase
(continued)

“Step” 7—Enhancement. *(continued) It is usually in the Government’s interest to incorporate many of these upgrades and enhancements into the FIP resource throughout the system life, in order to avoid early obsolescence.*

For this reason, you might include a *technology insertion clause* in the contract that requires the contractor to incorporate software and hardware improvements over the useful life of the FIP resource.

Or, rather than incorporating every enhancement from the original equipment manufacturer, you might require analyses and studies from a different contractor to recommend which enhancements to acquire.

The decision to stop enhancements usually comes when the FIP resource is nearing the end of the useful life. Regardless of available enhancements, there comes a time when it is more cost effective to acquire a new FIP resource, rather than continue enhancements to an older resource. Usually, the decision to acquire a new system will be based on the results of an analysis or study done as the FIP resource approaches the end of the system life.

As a contract specialist or contracting officer, you will be frequently concerned with enhancements of FIP resources over the system life, and may issue several separate contracts for this purpose.

End of Life Cycle
Phase

The *End of Life Cycle* phase is the last phase in the system life. This last phase includes *Closeout* and *Disposition* activities. As a contract specialist or contracting officer, you will be heavily involved in this phase of the system life cycle.

“Step 8”—Closeout. This step in the End of Life Cycle phase includes those activities that concern preparation to end the use of the FIP resource and phase it out of operation. The activities in this step are very similar to those for any commodity during closeout.

For example, it may no longer be cost effective to upgrade a large computer system after several years of operation. A new computer system may be scheduled for acquisition. As part of closeout, you might report a computer as “excess” or no longer required to the GSA, and make advance arrangements to transfer the old computer system to another agency for its use, after conversion to the new computer system.

(continued on next page)

5.2 Phases and Activities in the System Life Cycle *(continued)*

End of Life Cycle
Phase
(continued)

“Step 9”—Disposition. *Disposition* is the last step in the End of Life Cycle phase and in the entire system life cycle. The activities in this step occur after the FIP resource has been removed from operation and service. In this step, you will dispose of the FIP resource in accordance with agency regulations. For example, you might transfer the FIP resource to another agency for its use. Or, you might scrap the FIP resource, selling components only for their salvage value.

Differences in the
FIP Resource
System Life Cycle

In the case of a FIP resource acquisition for DoD, the life cycle management phases have somewhat different titles and terminology. For example, AR 25-3 (Life Cycle management of Information Systems) discusses the following life cycle management phases for an Army FIP resource acquisition. (Do not become confused; you will see that the overall life cycle management processes are very similar.)

As with the civilian agencies’ statement of need, the DoD process begins with a “Mission Needs Statement” (MNS). Thereafter, the DoD life cycle management is very detailed, with very specific products and activities assigned to each phase. After the MNS (with full justification) is approved, the life cycle management phases are:

Phase 1—Concepts Development. This follows the MNS. The purpose of this first phase is to identify and evaluate alternative functional and technical concepts that satisfy the MNS and to select the best concept. During this first phase, the following products are developed: the Program Manager’s (PM) charter and instructions; the System Decision Paper (SDP); a Test and Evaluation Master Plan (TEMP); system architecture; preliminary configuration management plan; Operations and Security (OPSEC) estimate; preliminary baseline agreement; and the MNS is validated.

Phase 2—Design. The purpose of this second phase is to complete the technical specifications for the information system and validate the design of the chosen system. During this second phase, the following products are developed or refined: the SDP; MNS; functional descriptions; OPSEC plan; IS design; security concept statement; architecture; design specifications; baseline agreement; economic analysis; TEMP; configuration management plan; acquisition strategy statement and the training plan.

(Topic continued on next page)

5.2 Phases and Activities in the System Life Cycle *(continued)*

Differences in the
FIP Resource
System Life Cycle
(continued)

Phase 3—Development. The purpose of this third phase is to develop the information systems test, test the system and prepare it for deployment. During this phase, the following products are developed or refined: the SDP; MNS and TEMP; and system support documents, such as manuals required; deployment plans and configuration management plan.

Phase 4—Deployment. The purpose of this fourth phase is to put the system into the field, for use by the intended users. In this phase, the users train on the system and begin to use and maintain the IS.

Phase 5—Operations. In this phase, the IS is fully operational and is evaluated for effectiveness. Modernizations are planned and carried out.

Phase 6—Revalidation. In this phase, a decision is made as to whether the IS conforms to the architectural requirements and continues to satisfy mission needs.

5.3 Difference between Major Automated Information System Life Cycle and Other Life Cycles (Major Weapon Systems)

Differences

If you have worked on DoD acquisitions for major weapons systems, you might think that the life cycle for major systems is very similar to the life cycle for a major automated information system. However, that is very misleading, because there are some key differences, particularly in development, and in the length of time required.

Difference in Development

One major difference is in the effort assigned to development. You will recall that the system life cycle for a FIP resource begins with the installation of the FIP resource. There is usually no effort given to developing the FIP resource item from the concept stage. In fact, the preferred policy is to use COTS items, wherever possible, to avoid drawn-out development costs.

On the other hand, the system life cycle for many major systems, such as weapons systems, requires that the entire system be developed from a concept, through final production, to deployment. This may require a great deal of effort and cost devoted to development activities, such as concept exploration, demonstration and validation before production and fielding of the system, at much greater cost than a COTS system. A special “Engineering and Manufacturing Development Phase” is required for major weapons systems

Time

A second major difference concerns time. The life cycle for a major weapons system may stretch out for some years. For example, some major weapons systems may require as much as 15 years before production and deployment is completed. Thereafter, the life cycle may be extended for many more years through product improvement programs and modifications. Such a long system life cycle would be very rare for an automated information system or other FIP resource

SUMMARY

In this chapter, you learned about the concept of systems life cycle and any unique differences in the area of FIP resources acquisition. In the next chapter, you will learn the definitions of key FIP resources terms.

CHAPTER 6

DEFINITION OF FIP RESOURCES TERMS

Chapter Vignette

“Okay, okay, I get the message,” said Mark. “I now realize that there are statutes, OMB circulars and specific policies in the FAR and FIRM that apply to the acquisition of FIP resources, and I also understand the meaning and importance of ethical conduct. I hope that I now understand the basis for this kind of procurement.”

“I recommend that you also spend a few minutes learning the exact meaning of key FIP resources terms,” Marcia said. “Some of the terms concerning FIP resources have very specific meanings. Even if you know a great deal about computers, you will find it useful to review these definitions. Unfortunately, some people throw these terms around carelessly, without regard to their intended meaning. That can be a problem later when we are developing the solicitation. Precise terminology is important.”

Course Learning Objectives

At the end of this chapter, you will be able to:

Overall:

Correctly use FIP resource terms.

Individual:

- 6.1 Identify common FIP resource terms and explain their significance.
- 6.2 Identify common types of technology, hardware, software, and telecommunications.
- 6.3 Identify major types of commercial suppliers to the Government

Chapter Overview

Scope	<p>This chapter is about terminology and technology. As you learned in the preceding chapters, a FIP resources acquisition has its own specific terminology. Words such as <i>ADPE</i> and <i>FIP resources</i> have very precise definitions and special meaning for your work.</p> <p>This chapter explains significant terms in a FIP resources acquisition. In addition, refer to the glossary for definitions of additional terms.</p>
Ambiguous Terms	<p>One of the problems with the language of FIP resource acquisitions is that many of the common terms and words have entered everyday language and become ambiguous, with unclear meanings.</p> <p>For example, the word <i>computer</i> can now be applied to mean anything from a hand-held computer (palmtop or personal digital assistant—PDA) to a large supercomputer, and all computer sizes in between.</p> <p>Other words that are commonly misused are <i>hardware</i>, <i>software</i>, and <i>program</i>. This can lead to confusion, so you should be careful to use FIP resources terms correctly in your conversations and acquisition documents.</p>
Significance of Definitions	<p>Definitions are important not just to understand terminology but also to establish a common base for communication. If you tell a contractor in a solicitation that proposed equipment will undergo <i>capability validation</i>, the contractor needs to know exactly what that term means and its significance to evaluation of his or her product during the acquisition process.</p> <p>Unfortunately, many people use FIP terminology with an incorrect and incomplete understanding of the definitions. A FIP resource acquisition can be difficult enough, without using incorrect terms and definitions. It is important that you learn, understand, and use these terms correctly to minimize confusion when you are buying FIP resources.</p> <p>Definitions serve another important purpose. As you learned in Chapter 1, the statutory definition of <i>ADPE</i> determines what equipment and services are subject to the special rules and regulations affecting <i>FIP resources</i>. You also learned that, under the Paperwork Reduction Reauthorization Act, <i>radar</i> and <i>sonar</i> equipment are exempt from the Brooks Act. So, to fully understand when the laws, policies, and regulations apply, you must understand the meaning of certain terms.</p>

(continued on next page)

Chapter Overview *(continued)*

References

FIRMR 201-1.002-1
 201-4
 201-39.101-3
 201-39.104-1
 201-39.2
 201-39.5202-1
 Bulletin A-1, *FIRMR Applicability*

DFARS 239-7401

The Paperwork Reduction Reauthorization Act, Public Law 99-500
 (especially the definition of ADPE codified at 40 U.S.C. 759(a)(2))

Additional Source of Definitions

See the glossary at the back of this manual for additional information and definition of terms related to FIP resources.

Topics Covered in this Chapter

The major topics in this chapter are:

SECTION	TITLE	PAGE
6.1	Definitions of Significant FIP Resources Terms	6-5
6.2	Common Types and Configurations of Hardware, Software, and Telecommunications	6-15
6.3	Major Commercial Suppliers	6-19

6.1 Definitions of Significant FIP Resources Terms

Definitions of Significant FIP Resources Terms

FIRMR 201-4 and
201-39.2
FIRMR Bulletin A-1

This section provides information on significant definitions that you will encounter in FIP resource acquisitions. These terms relate to the acquisition of FIP hardware, software, and telecommunications resources. You should use these terms as they are defined, in order to minimize confusion.

Note that the source for these definitions is the Federal Information Resources Management Regulation (FIRMR), specifically Parts 201-4 and 201-39.2 and FIRMR Bulletin A-1.

FIRMR 201-4 defines the words, terms, and acronyms important to understanding the FIRMR. Some of the terms in FIRMR 201-4 are also published in Subpart 201-39.2 and Bulletin A-1, which contain definitions especially important to the acquisition of FIP resources by contracting. In addition, other FIRMR Bulletins provide definitions specific to the subject matter of the bulletin.

For our purposes, some but not all of the terms defined in the FIRMR are significant. Relevant to your study are terms that:

- Determine Brooks Act applicability
- Define types of telecommunications resources in greater detail than the umbrella term *FIP resources*
- Describe a degree of competitiveness
- Have special meaning in contracting

These areas are addressed briefly in the sections below. Detailed definition tables with these and other key terms begin on page 6-10. These tables provide selected FIRMR definitions that you must know for FIP resource acquisitions. Unless otherwise indicated, the definitions are from FIRMR 201-4.

Remember that these tables are not all inclusive. For a more complete listing of definitions, consult FIRMR 201-4 and Bulletin A-1.

6.1 Definitions of Significant FIP Resources Terms *(continued)*

Terms Used to Determine Brooks Act Applicability

As you learned in Chapter 1, the Brooks Act gave GSA government-wide authority over *ADPE* and also gave GSA authority to define *ADPE*. The Warner Amendment later exempted certain DOD acquisitions from the Brooks Act. *ADPE* was later further defined in the law by the Paperwork Reduction Reauthorization Act. The statutory definition incorporated Warner Amendment exemptions and gave GSA broader authority over requirements which require “significant use” of *ADPE*. However, the law excluded contracts using *ADPE* “*incidental to*” the performance of Federal contracts. In addition, *radar*, *sonar*, *radio*, and *television* equipment were specifically excluded by the law from the definition of *ADPE*. GSA incorporated the statutory definition of *ADPE* in its definition of FIP resources. In FIRMR Bulletin A-1, GSA distinguishes between stand-alone and embedded FIP resources.

So you can see that understanding whether a product or service is subject to the Brooks Act requires you to be familiar with the definitions for:

- *ADPE*
- Radar equipment
- Sonar equipment
- Radio equipment
- Television equipment
- Significant use
- Incidental use
- Embedded FIP equipment

The law also gave GSA specific authority to define related resources as *ADPE*. Using this authority, GSA coined the term *FIP resources* to avoid confusion with the popular meaning of *ADPE*.

The first part of GSA’s definition of *FIP resources* in the FIRMR is the same language as that defining *ADPE* in the statute. The second part of the definition sets forth seven categories of *FIP resources*, all of which are then defined. So to define *ADPE*, GSA has chosen to define:

- FIP resources
- FIP equipment
- FIP maintenance
- FIP related supplies
- FIP services
- FIP software
- FIP support services
- FIP system

(Topic continued on next page)

6.1 Definitions of Significant FIP Resources Terms *(continued)*

Terms Used to
Determine Brooks
Act Applicability
(continued)

You should understand the differences among these categories, even though they are sometimes acquired as a package or system. The definitions of these terms are in the tables beginning on page 6-10, with FIP resources defined first. You will learn how to apply these terms (using the FIRMR and FIRMR Bulletin A-1) to decide what's a FIP resource in Chapter 15.

You know now that the definition of FIP resources is very broad, including many types of computer and telecommunications-related equipment, systems, and services. Examples include computers (with monitors and keyboards), disk and tape drives, servers (to link and serve several computers), printers, scanners, telecommunications switching devices, teleprocessing services, support services, computer-based training, maintenance services, software, and printer cartridges.

You will learn more about these types of FIP resources and how to buy them in the following chapters:

- Chapter 7, “Acquiring FIP Services”
- Chapter 8, “Acquiring FIP Support Services”
- Chapter 9, “Acquiring FIP Maintenance Services”
- Chapter 10, “Acquiring FIP Equipment”
- Chapter 12, “Acquiring Commercial Software”
- Chapter 14, “Acquiring Telecommunications”

Terms Used to
Describe Tele-
communications
Resources

Telecommunications resources are covered by the statutory definition of *ADPE* and the regulatory definition of *FIP resources* (since it adopts the statutory language).

... any equipment or interconnected system or subsystems of equipment that is used in the automatic acquisition, storage, manipulation, management, movement, control, display, *switching*, *interchange*, *transmission*, or *reception*, of data or information . . .

(Topic continued on next page)

6.1 Definitions of Significant FIP Resources Terms *(continued)*

Terms Used to
Describe Tele-
communications
Resources
(continued)

However, the FIRMR also provides definitions of telecommunications-related resources so that the scope and meaning of GSA procedures are clear. If you buy telecommunications-related resources, you should be familiar with the following terms:

- COMSEC (communications security)
- Consolidated local telecommunications service
- Customer premises equipment (CPE)
- Federal Telecommunications System (FTS)
- Telecommunications Device for the Deaf (TDD)
- Telecommunications facilities
- Telecommunications resources
- Telecommunications services
- Telecommunications switching function

FIRMR 201-4
DFARS 239.7401

Definitions for these terms are in the FIRMR and the table at the end of this section. You should also refer to DFARS 239.7401 which has additional definitions that apply specifically to DOD telecommunications acquisitions.

You will learn more about telecommunications acquisition in Chapter 14, “Acquiring Telecommunications.”

Terms Used to
Describe
Requirements
That Affects
Competitiveness

FIRMR 201-20.103-4

The FIRMR defines two terms used to describe limitations to competition:

- Compatibility-limited requirement
- Specific make and model specification

Compatibility-limited requirements place some restrictions on competitiveness by limiting offerings to those compatible with existing resources. FIRMR 201-20.103-4 requires that requirements for compatibility be justified based on technical or operational requirements or the unacceptable risk or effect of conversion if noncompatible resources are bought. Justification and approval (J&A) under the FAR for other than full and open competition is NOT required. *You must understand that documentation justifying a compatibility-limited requirement is not a justification for other than full and open competition.*

(Topic continued on next page)

6.1 Definitions of Significant FIP Resources Terms *(continued)*

Terms Used to
Describe
Requirements
That Affects
Competitiveness
(continued)

FIRMR 201-20.103-5
and 201-39.601

Specific make and model requirements are more restrictive than compatibility-limited requirements. They require a specific manufacturer's product. Regardless of the number of potential suppliers, this type of specification does NOT provide for full and open competition. FIRMR 201-20.103-5 and 201-39.601 provide that specific make and model requirements **MUST BE** justified in accordance with FAR 6.303 and 6.304. *So for specific make and model requirements, the same justification prepared under the provisions of FAR 6.303 and 6.304 meet both FAR and FIRMR requirements.*

Terms Used in
FIP Resource
Contracting

As you learned in Chapter 3, some contracting terms such as *lowest overall cost* reflect unique procedures in FIP resources contracting. Another term, *most advantageous alternative*, reflects the Government's interest in selecting the offer that represents the best value. The FIRMR also defines two terms, *capability validation* and *performance validation*, that describe the process of verifying conformance to the requirement of the resource or system obtained during the contracting process. See the following tables for definitions of these terms.

Deviations

FIRMR 201-3.402
and 201-39.104-1

A *deviation* is a variation from established, mandatory policies, procedures, practices, solicitation provisions, contract clauses, or methods. GSA can authorize *deviations* from the provisions of the FIRMR. *In strictly limited circumstances related to the acquisition of equipment for employees with disabilities, an agency's DSO (or his or her authorized representative) can authorize a deviation to the FIRMR.*

You can request either *class deviations* (affecting more than one contract action) or *individual deviations* (affecting only one contract action). You must explain the nature and reasons for the deviation in each request for a deviation, which is sent to:

General Services Administration
Policy and Regulations Division (KMP)
18th and F Streets, NW
Washington, DC 20405

You should refer to your agency's procedures (that the FIRMR mandates) for processing deviation requests.

(continued on next page)

SELECTED KEY FIP DEFINITIONS FROM THE FIRMR		
TERM:	MEANS...	
Federal information processing resources (FIP)	<p>Federal information processing (FIP) resources means automatic data processing equipment (ADPE) as defined in Public Law 99-500 (40 U.S.C. 759(a)(2)), and set out in paragraphs (a) and (b) of this definition.</p> <p>(a) Any equipment or interconnected system or subsystems of equipment that is used in the automatic acquisition, storage, manipulation, management, movement, control, display, switching, interchange, transmission, or reception, of data or information—</p> <ol style="list-style-type: none"> (1) by a Federal agency, or (2) under a contract with a Federal agency which— <ol style="list-style-type: none"> (i) requires the use of such equipment, or (ii) requires the performance of a service or the furnishing of a product which is performed or produced making significant use of such equipment. (b) Such term includes— <ol style="list-style-type: none"> (1) computers; (2) ancillary equipment; (3) software, firmware, and similar procedures; (4) services, including support services; and (5) related resources as defined by regulations issued by the Administrator for General Services. (c) The term, FIP resources, includes FIP equipment, software, services, support services, maintenance, related supplies, and systems. These terms are limited by 	<p>paragraphs (a) and (b) of the definition of FIP resources and are defined as follows:</p> <p>(d) FIP equipment means any equipment or interconnected system or subsystems of equipment used in the automatic acquisition, storage, manipulation, management, movement, control, display, switching, interchange, transmission, or reception of data or information.</p> <p>(e) FIP maintenance means those examination, testing, repair, or part replacement functions performed on FIP equipment or software.</p> <p>(f) FIP related supplies means any consumable item designed specifically for use with FIP equipment, software, services, or support services.</p> <p>(g) FIP services means any service, other than FIP support services, performed or furnished by using FIP equipment or software.</p> <p>(h) FIP software means any software, including firmware, specifically designed to make use of and extend the capabilities of FIP equipment.</p> <p>(i) FIP support services means any commercial nonpersonal services, including FIP maintenance, used in support of FIP equipment, software, or services.</p> <p>(j) FIP system means any organized combination of FIP equipment, software, services, support services, or related supplies.</p>
ADPE	see FIP resources (a) & (b), above.	
Agency	see Federal agency.	
Agency procurement request (APR)	a request by a Federal agency for GSA to acquire Federal information processing(FIP) resources or for GSA to delegate the authority to acquire FIP resources.	
Augmentation	adding to or upgrading existing FIP hardware or software to increase its productivity or prolong its useful life.	

TERM:	MEANS...
Capability validation	the technical verification of the ability of a proposed FIP system configuration, replacement component, or the features or functions of its software, to satisfy functional requirements. The intent is to ensure that the proposed FIP resource can provide the required functions. FIP performance requirements are not implied or measured in the validation. Examples of capability validation include: (a) Operational capability demonstrations (OCDs) of the functions of the hardware, operating system, or support software; (b) Verification of conformance with information processing standards; (c) Expert examination of the technical literature supplied with the offer; (d) Contacts with other users of the proposed information processing resource; and (e) Vendor certification of conformance with the functional requirements.
Compatibility-limited requirement	a statement of FIP resources requirements expressed in terms that require the items to be compatible with existing FIP resources.
COMSEC	communication security systems, services, and concepts that constitute protective measures taken to deny persons information derived from telecommunications of the United States Government related to national security and to ensure the authenticity of any such communications.
Consolidated local telecommunications service	local communications service provided by GSA to all Federal agencies located in a building, complex, or geographical area.
Customer premises equipment (CPE)	all telecommunications equipment and inside wiring located on the customer side of the demarcation point (demark), the point established in a building or complex to separate customer equipment from telephone company equipment.
Designated Senior Official (DSO)	(a) The senior official designated by executive agencies pursuant to the Paperwork Reduction Act to be responsible for carrying out the agency's IRM functions (see 44 U.S.C. 3506); or (b) The senior IRM official designated by the agency head for Federal agencies not subject to the Paperwork Reduction Act to be responsible for acquisitions of FIP resources made pursuant to a DPA.
Deviation	(a) The issuance or use of a policy, procedure, practice, solicitation provision, contract clause, or method pertaining to the acquisition, management, or use of FIP resources that is inconsistent with the FIRMR, (b) The omission or modification of any policy, procedure, practice, solicitation provision or contract clause required by the FIRMR, or (c) The authorization of lesser or greater limitations on the delegation, use, or application of any policy, procedure, solicitation provision, or contract clause prescribed by the FIRMR, except that this does not preclude an agency from setting delegation thresholds at more restrictive levels than those established by the FIRMR.
Excess FIP equipment	FIP equipment controlled by a Federal agency but no longer required for its needs.
Federal agency	any executive agency or any establishment in the legislative or judicial branch of the Government, except the Senate, the House of Representatives, the Architect of the Capitol, and any activities under the Architect's direction.
Federal Telecommunications System	the umbrella of local and long distance telecommunications services, including FTS2000 long distance services, provided, operated, managed, or maintained by GSA for the common use of all Federal agencies and other authorized users.

Definition of FIP Resources Terms

TERM:	MEANS...
Incidental use	FIP resources acquired by a contractor are incidental to the performance of a contract when: (i) None of the principal tasks of the contract depend directly on the use of the FIP resources, OR (ii) The requirements of the contract do not have the effect of substantially restricting the contractor's discretion in the acquisition and management of FIP resources, whether the use of FIP resources is or is not specifically stated in the contract. [FIRMR 201-1.002-1(b)(2)]
Information resources management	the planning, budgeting, organizing, directing, training, promoting, controlling, and management activities associated with the burden, collection, creation, use and dissemination of information by agencies, and includes the management of information and related resources, such as Federal information processing resources.
Interoperability	the ability of FIP resources to provide services to and accept services from other FIP resources and to use the services so exchanged to enable them to operate effectively together.
Lowest overall cost	the least expenditure of funds over the system life, price and other factors considered, including, but not necessarily limited to -- (a) prices for the FIP resources, (b) the present value adjustment, if used, and (c) the identifiable and quantifiable costs-- (1) directly related to the acquisition and use of the FIP resources, (2) of conducting the contract action, and (3) of other administrative efforts directly related to the acquisition process.
Most advantageous alternative	the alternative that provides the greatest value to the Government over the system life in terms of price or cost, quality, performance, and any other relevant factors.
Obsolescence	the state of FIP hardware or software that is either in a degenerative condition which if not corrected will render the resource useless, or becoming technologically outmoded compared to other hardware or software being sold.
Outdated FIP equipment	any FIP equipment over eight years old, based on the initial commercial installation date of that model of equipment, and that is no longer in current production.
Performance validation	the technical verification of the ability of a proposed FIP system configuration or replacement component to meet agency-specified performance requirements. Examples include timed executions of actual or sample workloads, remote terminal emulation with simulated on-line workloads, acceptance testing with current software and files, stress testing with exaggerated workloads, workload modeling, benchmarking, and simulation modeling.
Radar equipment	any radio detection device that provides information on range, azimuth, or elevation of objects.
Radio equipment	any equipment or interconnected system or subsystem of equipment (both transmission and reception) that is used to communicate over a distance by modulating and radiating electromagnetic waves in space without artificial guide -- does NOT include such items as microwave, satellite, or cellular telephone equipment.

TERM:	MEANS...
Significant use	Significant use of FIP resources means: (i) the service or product of the contract could not reasonably be produced or performed without the use of FIP resources, AND (ii) the dollar value of FIP resources expended by the contractor to perform the service or furnish the product is expected to exceed \$500,000 or 20 percent of the estimated cost of the contract, whichever amount is lower. [FIRMR 201-1.002-1(b)(3)]
Software: Application Software	A series of instructions or statements in a form acceptable to a computer, designed to cause the computer to execute an operation or operations necessary to process requirements. Application software may be either machine-dependent or machine-independent and may be general-purpose or designed to satisfy the requirements of a specialized process or a particular user.
Common-use software	Software that deals with applications common to many agencies that would be useful to other agencies, and is written in such a way that minor variations in requirements can be accommodated without significant programming effort.
Sonar equipment	an apparatus that detects the presence and location of a submerged object by means of sonic, subsonic, or supersonic waves reflected back to it from the object.
Specific make and model	a description of the government's requirement for FIP resources that is so restrictive that only a particular manufacturer's products will satisfy the government's needs, regardless of the number of suppliers that may be able to furnish that manufacturer's products.
System life	a projection of the time period that begins with the installation of the FIP resource and ends when the agency's need for that resource has terminated.
Telecommunications Device for the Deaf (TDD)	a machine that uses typed input and output, usually with a visual text display, to enable individuals with hearing or speech impairments to communicate over a telecommunications network.
Telecommunications facilities	equipment used for such modes of transmission as telephone, data, facsimile, video, radio, audio, and such corollary items as switches, wire, cable, access arrangements, and communications security facilities.
Telecommunications resources	telecommunications equipment, facilities and services.
Telecommunications services	the transmission, emission, or reception of signals, signs, writing, images, sounds, or intelligence of any nature, by wire, cable, satellite, fiber optics, laser, radio, or any other electronic, electric, electromagnetic, or acoustically coupled means. The term includes the telecommunications facilities necessary to provide such services.
Telecommunications switching function	any service or equipment that has a primary function to switch telephone calls at a location -- <i>excludes</i> service or equipment necessary to meet agency requirements that cannot be met by an existing switching function.
Television equipment	any equipment (both transmission and reception) used for the conversion of transient visual images into electrical signals that can be transmitted by radio or wire to distant receivers where the signals can be reconverted to the original visual images—does NOT include such items as monitors for computers or computer terminals or video conferencing equipment.

SELECTED KEY FIP DEFINITIONS FROM FIRMR BULLETIN A-1	
TERM:	MEANS...
Central Processing Unit (CPU)	The portion of a computer that includes circuits controlling the interpretation and execution of instructions. It executes programmed instructions, performs arithmetic and logical functions on data, and controls in put/output functions
Centrex Service	A service offered by operating telephone companies which provides, from the telephone company office, functions and features comparable to those provided by a PBX.
Embedded FIP Equipment	Equipment that is an integral part of the product, where the principal function of the product is not the “automatic acquisition, storage, manipulation, management, movement, control display, switching, interchange, transmission, or reception of data or information.
Facsimile Machine (FAX)	The process by which fixed graphic materials, including pictures or images, is scanned and the information converted into electrical signals that may be transmitted over a telecommunications systems and used to record a copy of the original.
Firmware	Software in fixed or wired-in storage. Sometimes called hard software.
Microwave	A term loosely applied to those radio frequency wavelengths that are sufficiently short to exhibit some of the properties of light, e.g., they are easily concentrated into a beam.
Modem	Acronym for MODulator-DEModulator. A device that modulates and demodulates signals. For example, a computer modem modulates (translates) computer signals into a form suitable for transmission over telephone lines and demodulates (converts) telephone signals back into a form suitable for a computer.
Network	A combination of terminals and circuits in which transmission facilities interconnect the user stations
Private Branch Exchange (PBX)	A private telecommunications exchange that usually includes access to the public switched network
Satellite Communications	Any telecommunications services provided via one or more satellite relays and their associated uplinks and downlinks.

6.2 Common Types and Configurations of Hardware, Software, and Telecommunications

Technical Terminology

In addition to the definitions for FIP resources and FIP resources acquisition, you should also know technical terms that describe common types and configurations of FIP resources. The term *configuration* refers to the way in which the hardware, software and telecommunications are laid out and connected to meet the agency's requirements. See the Table of Technical Terms on the previous pages and the sections below.

Hardwiring

The term *hardwiring* refers to equipment physically and exclusively connected by cable. For example, a computer directly cabled to a peripheral (such as a printer or scanner) which serves only that computer is *hardwired*. This configuration is often found in small offices, where only one computer may be available. In such cases, the computer may be directly connected to a printer, scanner, and modem.

The advantages of *hardwiring* are security and speed. The disadvantages are lack of flexibility (the printer only supports one user) and cost (each user has a separate printer or must take a disk to another computer).

Networking

Networking refers to the connection of all hardware located at one or more sites (and managed by special software). With *networking*, a "server" computer allows many users to use their own computers independently, but also to share one or more printers, scanners, or other peripherals. Users on the network may even share software, communicate with one another, and access centralized databases and files. *Networking* is increasingly common in most offices, even at widely scattered sites. Networks can use telephone lines to extend the network to distant sites.

The advantages of *networked* systems are greater flexibility, electronic communication, and lower cost (due to sharing of peripherals). The disadvantages of *networking* are greater security threats from computer viruses or unauthorized access and contention delays since networked resources are shared.

6.2 Common Types and Configurations of Hardware, Software, and Telecommunications *(continued)*

Common Types of Hardware

Computers are the most common and visible type of FIP hardware. The term *computers* refers to all types of processors, ranging in size from palmtops to supercomputers, and including personal digital assistants (PDAs), laptops, desk-top microcomputers, cabinet-sized minicomputers, and mainframe computers.

The term *peripherals* refers to computer-connected devices used to store, transmit, or prepare human- or machine-readable documents. The most common type of *peripheral* is the printer. In addition to printers, computers may be connected to scanners for inputting images and whole pages of text, extra capacity disk drives, tape back-up drives, and CD-ROM readers.

Common Types of Software

There are two general classes of software:

- *Operating system software* sends instructions to the computer and tells it which operations to perform. For the most part, operating system software is “invisible” or “transparent” to the user. It cannot be changed, except by software programmers.
- *Applications software* is off-the-shelf or custom software that allows the user to perform a specific type of work (application), such as word processing, drawing (graphics), database entry, and spreadsheet calculations. Users interact directly with this type of software and can adapt its use for customized processing and output.

(Topic continued on next page)

6.2 Common Types and Configurations of Hardware, Software, and Telecommunications *(continued)*

Common Types of Software (continued)

There are thousands of less common applications programs for special applications such as engineering, medicine, and science. Some are especially made for specific, one-of-a-kind Government requirements. Others are broadly applicable, defined by the FIRMR as *common-use software*—applications software useful to more than one agency that may be shared.

You will learn more about commercially available software in Chapter 12, *Acquiring Commercial Software*.

Bundling

Some OEMs offer to sell hardware with software already loaded or *bundled*. For example, a hardware manufacturer might offer a desk-top or laptop computer with the operating system software, a popular word processing program, and a spreadsheet program already *bundled* as part of a package deal. Normally, the use of *bundling* is discouraged in Government acquisitions, because it may discourage competition and may lock the agency into software it does not want or need, or that is incompatible with existing agency software.

Common Types of Telecommunications

Finally, in addition to the most common types of FIP hardware and software, you should understand the most common telecommunications terms, definitions, and concepts.

Most telecommunications transmissions originating in the office travel over “voice-grade” telephone lines. Internal or external (to the computer) *modems* (modulators/demodulators) convert the computer’s signals into signals that can be transmitted over telephone lines. Sometimes circuits capable of transmitting at higher speed (baud rate) and clarity are dedicated to carry communications between computers.

(Topic continued on next page)

6.2 Common Types and Configurations of Hardware, Software, and Telecommunications *(continued)*

Common Types of Telecommunications *(continued)*

There are many terms in the FIRMR and FIRMR Bulletins that are used to describe different types of telecommunications resources. For example, *customer premises equipment (CPE)* refers to building wiring and switching not owned by the local telephone company. *Consolidated local telephone service* refers to mandatory local (not long distance) service provided by GSA to users in buildings, complexes, or geographical areas. Such services may include switching (switchboards), sometimes referred to as *PBXs (private branch exchanges)* or *centrex service*. Intercity (long-distance) service is typically provided to agencies by the *FTS2000* system. The *FTS2000* system is a mandatory contractual source managed by GSA with contractor support.

More information on these and related terms are in the FIRMR and in FIRMR Bulletins, such as:

- FIRMR Bulletin C-15, *Mandatory Local Telecommunications Services*
- FIRMR Bulletin C-18, *Federal Telecommunications System 2000 (FTS2000)*
- FIRMR Bulletin C-21, *Purchase of Telecommunications Services (POTS) Contracts*

We now think of the telephone, television and computer as separate devices, but telecommunications technologies are rapidly merging. You may soon be involved in acquiring FIP resources that combine elements of all three, such as video teleconferencing systems.

You will learn more about telecommunications in Chapter 14, “Acquiring Telecommunications.”

6.3 Major Commercial Suppliers

Major Suppliers

This section discusses the major commercial suppliers of FIP resources, including original equipment manufacturers (OEMs), third party vendors, integrators, brokers, and regular dealers or distributors. During market research for a FIP resource acquisition, your agency may contact all of these sources for information. Each may have a significant interest that differs from the interests of the others. How you plan your procurement may well determine whether or not a supplier can or will compete.

Therefore, you will probably never receive offers or bids from all these types of suppliers in a single FIP resources acquisition. However, some of the more complex acquisitions may support offers from or teaming by several of these suppliers.

You will learn more about contacting sources to determine market availability and prices in Chapter 16, “Market Research for Acquisition of FIP Resources.”

Original Equipment Manufacturers (OEMs)

Original equipment manufacturers are those vendors who produce FIP resources. They may sell their products directly and/or through dealers or distributors. For example, IBM makes desk-top and laptop computers and sells them both directly and through retail stores by dealers or “resellers.” Other OEMs of microcomputers include Compaq, Apple, and Dell.

Some OEMs specialize in very powerful or special purpose computers, such as “work stations” or supercomputers that are sold to Federal agencies in much smaller numbers. They are usually installed and maintained by the OEM. These OEMs include Sun, Cray, and Thinking Machines. At the other size extreme, some OEMs manufacture the new technology referred to as “Personal Digital Assistants” (PDAs). Examples include Apple and Tandy.

When the OEM sells directly to the consumer, the sale may be a “package deal,” offering bundled services such as maintenance or system integration (meaning, putting it together and making it work). You must be sure to specify your agency’s needs in terms of mandatory and optional requirements, so OEMs must conform offers to your specifications.

(continued on next page)

6.3 Major Commercial Suppliers *(continued)*

Third Party Vendors

Third party vendors purchase FIP products from OEMs and other parties and resell the products to the end user. Since *third party vendors* buy at wholesale prices in great volume, they can often sell at competitive retail prices. For many FIP products, such as desk-top and laptop computers, the *third party vendor* faces intense competition and must keep prices low.

Many *third party vendors* (sometimes called “after market” vendors) may not sell complete FIP systems but components, such as special purpose computer chips for upgrading OEM systems. They often do this from a central warehouse location, using toll-free 800 numbers, and do not provide maintenance support, advice, or installation.

Therefore, when a *third party vendor* sells directly to the consumer, value-added services are not always available or offered. You must make sure that you specify all the products or services that your agency needs. Third party vendors can team with OEMs or service firms to meet your needs. They may provide services not normally provided by dealers.

Integrators

Integrators (sometimes called system integrators) specialize in selling integration services for FIP resource products. They put together the components of a FIP system and make them work. *Integrators* may provide both products and services—or just services.

Normally, *integrators* do NOT manufacture FIP products (major components), although they may make some key devices that allow equipment made by different OEMs or other sources to communicate and operate with one another.

Integrators often design and develop a configuration or system for a Federal agency. In some complex acquisitions, the *integrator* may function as the prime contractor and integrate components provided by many different OEMs and third party vendors. The *integrator* normally is responsible for designing, connecting, establishing, troubleshooting, and testing the system. Because *integrators* perform as prime contractors, they assume all responsibility for FIP resource contract performance.

6.3 Major Commercial Suppliers *(continued)*

Brokers

Brokers are also not involved in the manufacture of FIP resources, nor do they typically maintain an inventory of products. Instead, they function as agents between buyers and sellers. *Brokers* charge a commission which adds to the cost of the acquisition. *Brokers* may sometimes be contacted in market research for FIP resources which are known to be out of production (no longer manufactured), are difficult to locate, but are still required by an agency.

FAR Requirements

FAR 22.6

The Walsh-Healey Act as defined in FAR Subpart 22.6 places some restrictions on contracting with individuals who are not manufacturers or regular dealers.

Regular Dealers or Distributors

FAR 22.606-2(b)

Regular dealers and distributors do not manufacture FIP resources. A dealer or distributor normally has an agreement with one or more OEMs to purchase, maintain an inventory, and distribute the manufacturers' products through retail sales. The FAR now provides for alternate "regular dealers" qualification requirements for information systems integrations. The integrator does not physically have to maintain a stock. *Regular dealers and distributors* often provide some FIP support services for the FIP equipment they have sold.

SUMMARY

In this chapter, you learned the definitions of common FIP resources terms and their significance to FIP resources acquisitions. You also learned about the common types and configurations of hardware, software, and telecommunications in general, and about major commercial suppliers of these products and services. The next chapter discusses acquiring FIP services.

CHAPTER 7

ACQUIRING FIP SERVICES

Chapter Vignette

“I think that I understand the idea of acquiring the hardware and software in a FIP acquisition,” said Mark, “but what kinds of FIP services do we normally obtain?”

“That depends on the acquisition, of course,” replied Marcia. “You will see that there are a wide variety of FIP services, including E-mail, Fax, teleprocessing/time sharing, and voice mail. Of course, it is not likely that any one FIP resource acquisition will include all of these FIP services, but most acquisitions will include at least several of these. The current trend in Government is to acquire more FIP services, so you should understand each of them.”

Course Learning Objectives

At the end of this chapter, you will be able to:

Overall:

Identify the various types of services.

Individual:

- 7.1 Explain the difference between FIP services and FIP support services.
- 7.2 Identify the various types of services requested, according to FIRMR definitions.
- 7.3 Explain the current major issues involving acquisition of FIP services.

Chapter Overview

Scope

This chapter discusses the types of FIP services which you, as a contract specialist or contracting officer, may acquire. Sometimes, you may acquire these FIP services as part of a “package” which will also include hardware and software. At other times, you may acquire only FIP services. This chapter also explains the differences between FIP services and FIP support services, and discusses the various types of FIP services. Finally, this chapter discusses some of the current issues in the acquisition of FIP services.

References

FAR	37.2 37.101 37.104 44.3 44.202-2 52.244-5	DFARS	222.10 222.1014
		FIRMR	201-4.001, 201-20.203-1
		FIRMR Bulletins	A-1, C-1, C-11, C-15, C-16, C-18, C-20

FTS2000 Agency Reference Guide

Topics Covered in this Chapter

The major topics in this chapter are:

SECTION	TITLE	PAGE
7.1	Differences Between FIP Services and FIP Support Services	7-4
7.2	Identifying FIP Services	7-5
7.3	Current Issues Involving the Acquisition of FIP Services	7-9

7.1 Differences Between FIP Services and FIP Support Services

FIP Services vs.
FIP Support
Services

FIRMR 201-4.001

It is easy to confuse FIP services with FIP support services, but the two **are different**. According to the FIRMR, the definitions are:

FIP Services –any service, *other than FIP Support Services*, performed or furnished by using FIP equipment or software.

FIP Support Services –any commercial nonpersonal service, including FIP maintenance, used in support of FIP equipment, software, or services.

You will see that FIP services are primarily dependent on use of contractor hardware and software that may not even be located at a Government facility. In fact, the user of FIP services may never see the contractor, e.g., teleprocessing.

FIRMR 201-20.203-1

Note that some FIP services can be **shared** by agencies. You should be aware that FIRMR 201-20.203-1 requires agencies to consider using available resources on a shared basis as an alternative for satisfying their requirements, rather than contracting out for such services.

7.2 Identifying FIP Services

Introduction to FIP Services

In a FIP resource acquisition, in addition to the hardware and software, there may be a requirement for *FIP services*. Or, *FIP services may be acquired separately*. For example, years after a major hardware or software acquisition, the Government may acquire certain FIP services, such as teleprocessing to meet agency needs. Many FIP services are very highly automated, with relatively little interaction with contractor personnel. Such FIP services are said to be "invisible" or "transparent" to the user, because, unlike FIP support services, they require little or no contact with contractor personnel. For example, voice mail services operate with little or no interaction with contractor personnel. The following are examples of the FIP services which you may encounter.

Eight Types of FIP Services

FIP services can include one or more of the following eight types:

- teleprocessing
- local batch processing
- electronic mail
- voice mail
- centrex
- cellular telephone
- facsimile
- packet switching of data

You would probably not acquire all eight of these types of FIP services in any one acquisition. Each of these FIP services is explained in some detail in the following pages.

(For additional information on acquiring these FIP services, you may need to consult the FTS 2000 Agency Reference Guide, FIRMR Bulletins A-1 on FIRMR applicability, C-15 on mandatory local telephone services, C-16 on emergency telecommunications, C-18 on FTS2000, and C-20 on NSEP.)

(continued on next page)

7.2 Identifying FIP Services *(continued)*

Example of Non-FIP Services

However, not every service performed on a computer is necessarily a FIP service. For example, FIRMR Bulletin A-1 warns that transcription services (the services required to make a hard copy of dictated or recorded matter) is NOT a FIP service.

Teleprocessing

The first type of FIP service that you might acquire is *teleprocessing*. Teleprocessing usually involves the leasing of computer services (usually on a large main frame computer) for processing and transmitting very large amounts of data. This FIP service usually requires a private contractor to process and transmit the data to points designated by the Government. This FIP service involves both FIP equipment and software.

Time-sharing is a form of teleprocessing in which the Government may lease time on a contractor's or another agency's computer to process Government business. Note that the contractor's computer may be located many miles away from the Government location and will also work on other business.

FIRMR 201-21.403

Note that FIRMR 201-21.403 requires agencies to contact GSA if they wish to allow time-sharing of their excess capacity of FIP resources by other agencies. Information on sharing telecommunications resources is available in FIRMR Bulletin C-1, which includes locations for sharing of telecommunications resources.

Local Batch Processing

A second FIP service which you may be asked to acquire is *local batch processing*. This is a type of FIP service in which the Government "batches" or accumulates a certain amount of material to be processed. The "batch" is then provided electronically to the contractor for processing on its computer. This requires both FIP equipment and software.

Batch processing has certain advantages and disadvantages. A major advantage is efficiency of processing. The entire batch can be saved and processed at the same time, usually during off-peak hours, such as evenings and weekends, when processing rates may be lower. This can be very efficient for many requirements, especially bulky, periodic or repetitive reports, such as monthly and quarterly reports, payrolls or detailed personnel records.

(Topic continued on next page)

7.2 Identifying FIP Services *(continued)*

Local Batch Processing (continued)

On the other hand, a disadvantage of local batch processing is the time sensitivity. The completed processed information is accurate only immediately after processing. The information it provides is not updated again until the next batch processing, which may be in days, weeks or months, so this service is usually not suitable where very frequent updates are essential.

Electronic Mail

Electronic mail is a third type of FIP service which you might acquire. This is a widely used system for storing and sending messages from one person to another by computer. One user types in a text message on a computer and addresses it to one or more recipients. The message is stored and forwarded to the addressee(s), and will remain stored for recall until deleted. E mail is available as one of the FTS2000 services and also provides capabilities for electronic bulletin boards, computer conferencing, electronic forms generation, and applications processing. E mail is also available to meet National Security and Emergency Preparedness Service (NSEP) requirements. FIRMR Bulletin C-20 provides further details on NSEP.

Voice Mail

Voice mail is a fourth FIP service which you may encounter in an acquisition. Voice mail allows a caller on any telephone to record a brief voice message which will be stored and available to the addressee until the addressee deletes the message. Voice mail is very popular for brief messages and very easy to use. This service is also available under the FTS2000 contract to meet NSEP requirements. (See FIRMR Bulletin C-20.)

Centrex

A fifth type of FIP service which you may acquire is *Centrex*. Centrex or *central exchange* services provide access to the telecommunications system through a central exchange, usually located off the Government premises, and also serving other customers. Access to a centrex is usually adequate to meet most of the telecommunications requirements for many small Government offices.

The alternative to the centrex is the PBX (private branch exchange) which is more appropriate for very large users who generate a great deal of telecommunications traffic. In this case, the exchange and switching equipment may even be located on the Government's property, such as in a Government office complex.

(Topic continued on next page)

7.2 Identifying FIP Services *(continued)*

Centrex
(continued)

Usually, the decision to request a PBX system, rather than Centrex services, is based on analysis of cost and technical factors such as space required, number of circuits, and functions required. These technical analyses are done by program and technical personnel and included in the requirements analysis and do not normally concern you directly.

Cellular
Telephone

A sixth type of FIP service which you may be asked to acquire is *cellular telephone* service. Cellular service allows a caller with a portable cellular telephone within almost any metropolitan location to call almost any other telephone in the world. The major technical requirement is that the original caller's telephone and the receiving telephone be within the range served by a cellular telephone relay system. This now applies in nearly all urban areas in the United States and Europe and the networks are constantly being upgraded and expanded throughout the world. It is theoretically possible to extend cellular phone service to any point on the earth. Most experts believe that it will very soon be possible to assign each person one unique phone number that others can call to reach that person anywhere in the world by cellular phone.

Facsimile Services

Facsimile is another example of a FIP service which you might be asked to acquire. Facsimile (Fax) allows the transmission of text, two dimensional graphics or images over the system from one Fax machine to any other Fax machine which can be reached by the telecommunications system. Fax is especially useful for providing "hard copy" printouts of several pages in length when there is no particular need for very high resolution, such as pages of text, or simple diagrams and graphics in black and white.

Packet Switching
of Data

An eighth type of FIP service which you may acquire is *packet switching of data*. Packet switching of data is used to break large amounts of data down electronically into smaller "packets" which are then transmitted over the telecommunications system, from computer to computer. The "packets" are then electronically "reassembled" at the destination with little or no apparent change to the receiver. This type of FIP service is useful if an agency has a requirement for cost-effective transmission of very large amounts of data among computers which may be widely separated, and can also be used for interactive operation. This type of FIP service is also available under the FTS 2000 contract.

7.3 Current Issues Involving Acquisition of FIP Services

Current Availability of FIP Services

You should know that there are several issues involved in the acquisition of FIP services. The first issue is the current availability of these services. You can see from the description of FIP services that they involve a combination of hardware, software, and telecommunications that are usually “invisible” or “transparent” to the user. As a contract specialist, you should be aware that these FIP services, and related services, such as video teleconferencing, are already available through the existing FTS2000 contracts. You should not automatically enter into contracting for FIP services without checking for the availability of FIP services through existing contracts.

Delegation of Acquisition Authority

FIRMR 201-20.306

A second issue concerns delegation of contracting authority for FIP services. FIRMR 201-20.306 explains the procedures for delegation of multiyear contracting authority for telecommunications services from the GSA to other agencies. FIRMR Bulletin C-5 further explains GSA's delegation of authority to agencies. You will see that it is possible to obtain authority to contract for FIP services, provided that the requirement cannot be met through an existing contract.

However, in the event that you receive a requirement for acquisition of FIP services, you should first always consult FIRMR Bulletin A-1, to determine if the FIRMR applies, as you should for any FIP resources acquisition. Then, check FIRMR Bulletin C-1 on sharing of telecommunications resources by agencies and C-11 on sharing of data processing capacity. If a request for FIP services involves telecommunications, consult FIRMR Bulletin C-18 on FTS2000 and contact your agency's FTS coordinator and GSA before you initiate acquisition actions. This approach is summarized in the following table.

STEP	ACTION
Step 1	Check FIRMR Bulletin A-1 to determine if the proposed acquisition of FIP services is subject to the FIRMR. (See Chapter 15 for a detailed discussion of procedures.)
Step 2	Check FIRMR Bulletins C-1 and C-11 to determine if the requirement can be met by sharing of existing resources.
Step 3	Check FIRMR Bulletin C-18 on the FTS2000 contract. Remember that many FIP services will also involve telecommunications and may already be available through the existing FTS2000 contracts.

If the required FIP services are not available through the sources explained in these references then you can proceed with acquisition.

7.3 Current Issues Involving Acquisition of FIP Services *(continued)*

Rapid Advances in FIP Services

A third issue concerns changes in available FIP services. You should be aware that the area of FIP services continues to experience very rapid advances due to changes in technology. For example, two-way videoteleconferencing is growing very rapidly in capability and acceptance. Until recently, the use of videoteleconferencing required rooms with special acoustics and other expensive requirements. It is now possible to conduct two-way videoteleconferencing between ordinary conference rooms or offices at much lower cost, with relatively short lead times and minimum preparation. As technology continues to advance, you can expect that an increasing number of FIP services will be offered by commercial sources.

SUMMARY

In this chapter, you learned to distinguish the various types of FIP services. In the next chapter, you will learn to distinguish and explain the differences between FIP services and FIP support services in a general way.

CHAPTER 8

ACQUIRING FIP SUPPORT SERVICES

Chapter Vignette

“Well, I guess there is a lot to know about FIP services, but I am not completely clear on FIP support services,” said Mark.

“Remember that FIP support services are sometimes confused with FIP services,” Marcia replied. “FIP support services include some fairly complex procedures which the Government may choose to obtain from the private sector. FIP support services can include tasks, such as: system design and analysis, cost benefit analysis, specification development, benchmarking, LTDs, evaluation criteria, maintenance services, some types of training, and software development and integration services.”

Course Learning Objectives

At the end of this chapter, you will be able to:

Overall:

Generalize the differences between FIP services and FIP support services.

Individual:

- 8.1 Distinguish among and explain the various types of FIP support services.
- 8.2 Explain types of FIP testing
- 8.3 Explain Personal or nonpersonal FIP support service.
- 8.4 Explain FIPS PUBS and Federal Standards usage as it is related to testing in the FIP resources environment.
- 8.5 Explain the appropriate use of DIDs in a FIP resources acquisition.

Chapter Overview

Scope

This chapter will describe FIP support services. It will explain how to identify the differences between FIP services and FIP support services. It will distinguish among the various categories of FIP support services, including clerical, technical and professional FIP support services and explain determination of personal and nonpersonal FIP support services. It will also distinguish among the various nonpersonal FIP support services, including labor categories for clerical, technical and professional FIP support services.

It will also explain:

- types of testing
 - use of DIDs in a FIP resource acquisition
 - FIPS PUBS and Federal Standards as they apply to testing in a FIP resources environment
-

Chapter Overview

References

It is recommended that you have access to the following references in order to understand the discussion of topics in this chapter:

- FIRM 201-4.001
 - FIRM 201-20.304
 - FIRM Bulletins A-1, B-1, C-4, and C-32
 - FIPS PUBS, especially 42-1, 75, and 101
 - Federal Standards
 - Data Item Descriptions (DIDs) and DoD Standard 963A
 - GSA's *A Guide for Acquiring System Integration Services*
 - GSA's *A Guide for Acquiring Software Development Services*
 - GSA's *A Guide for Acquiring Federal Processing Support Services*
 - GSA Handbook—*Federal ADP and Telecommunications Standards Index*
 - GSA/KEES—*Use and Specifications of Remote Terminal Emulation in ADP System Acquisition*
 - NIST Special Publications 500-13, 500-18 and 500-123
 - FEDSIM Publication—*Proceedings of the Symposium on Benchmarking and Alternatives*
 - OMB Circular A-120
-

Topics Covered in this Chapter

The major topics are:

SECTION	TITLE	PAGE
8.1	Types of FIP Support Services	8-5
8.2	Types of FIP Testing	8-12
8.3	Nonpersonal Services	8-16
8.4	FIPS PUBS and Federal Standards for Testing of FIP Resources	8-23
8.5	Appropriate Use of DIDs in a FIP Resources Acquisition	8-25

8.1 Types FIP Support Services

Description of FIP Support Services

FIRMR 201-4.001

You will recall that Chapter 7 (“Acquiring FIP Services”) explained the difference between FIP Services and FIP Support Services. Here again are the definitions from FIRMR 201-4.001:

- *FIP services* are any services, OTHER than FIP support services, performed or furnished by using FIP equipment or software. (Examples include: local batch processing, electronic mail, voice mail, centrex, cellular phone service, facsimile packet switching of data, and teleprocessing/time sharing).
 - *FIP Support Services* are any commercial NONPERSONAL services, including FIP maintenance, used in support of FIP equipment, software, or services.
-

8.1 Types of FIP Support Services

Examples of FIP Support Services

For the purposes of FIP resources acquisition, there are many examples of FIP support services that you should understand. FIRMR Bulletin A-1 mentions:

- Source Data Entry;
- Computer Output Microfilming;
- Software conversion;
- Training;
- Planning for FIP resources;
- Capability and performance validation;
- Studies (e.g., requirements analyses, analyses of alternatives and conversion studies);
- Facilities management of Government-furnished FIP equipment;
- Custom software development;
- Systems analysis and design;
- Network management;
- Network analysis and design;
- Site preparation; and
- Computer performance evaluation and capacity management

You can see that some types of FIP support services are easy to understand. For example, maintenance services performed on FIP hardware are fairly easy to understand, and similar in concept to support services for any other type of acquisition. FIRMR Bulletin A-1 briefly explains several FIP support services. Also, you should consult the GSA guides for additional information on FIP support services.

(Note: Because FIP maintenance services are so important, they are also discussed separately in Chapter 9, “Acquiring Maintenance Services.”)

8.1 Types of FIP Support Services *(continued)*

Examples of FIP Support Services

Other easy-to-understand examples of FIP support services include system design and analysis, cost benefit analysis, specification development, and evaluation criteria development. These are all examples of professional FIP support services that you might require in many complex acquisitions other than FIP resources. You may already have experience in acquiring these types of support services for other projects.

However, some of the other examples of FIP support services may not be so easy to understand at first. For example, a requiring agency might ask your assistance in acquiring microfilming service of computer output documents, software conversion, capability and performance validation, special studies, or site preparation. These are all examples of professional FIP support services that you will rarely encounter except in a FIP resource acquisition.

As with FIP services, FIP support services may either be acquired as part of a large scale hardware and software “buy,” or acquired separately, before, during, and after acquisition of FIP hardware and software. The remainder of this section explains each type of FIP support service, with examples of each.

System Analysis and Design

System analysis and design is an example of FIP professional support services that you may require. This type of FIP support service might be requested by an agency from commercial sources either to analyze an *existing* system, such as an installed computer system, or to assist in *designing a new system to be acquired*.

You can see that this support service could be requested as part of the requirements analysis for an acquisition. There are commercial sources which specialize in this type of FIP support service, before the system is acquired. Some of these sources offer system integration after the system is acquired. However, in most cases you cannot contract with the same source for both functions because of possible conflicts of interest.

8.1 Types of FIP Support Services *(continued)*

Cost Benefit Analysis

Cost benefit analysis is also a FIP support service which may be requested by an agency prior to a complex system acquisition, or as part of a complex conversion study, to determine the relative benefits and costs for different courses of action. For example, an agency might need this support service to support a decision on whether or not to go ahead with a software acquisition or to modify the existing software “in house” using Government personnel.

Specification Development

An agency might also ask for assistance in *specification development*. This type of FIP support service might be useful in those cases where agency technical personnel do not have enough expertise or experience in determining which specifications should be used in a complex solicitation for either hardware or software. In some cases, this support service may be requested because it is necessary to obtain the latest expertise concerning state-of-the-art advances in the commercial sector.

Benchmarking

Benchmarking is the construction of user tests to verify performance of a proposed system by measuring its ability to execute a group of user programs that are representative of the projected workload within certain predetermined user time requirements.

For example, suppose an agency needs a sophisticated scanner and computer system with software able to read 5,000 pages of files each day. If an offeror claims his software has the ability to read 7,000 agency pages per day, the agency could devise a “benchmark” test to determine whether it really can do so. In this case, the agency might set up a test that requires the scanner, computer and software to read the file pages under realistic operating conditions.

The key to benchmarking is the realism of the test. FIRMR Bulletin C-4 (Federal ADP and Telecommunications Standards Index) provides guidance on benchmarking. FIPS PUBS 42-1 and 75 also explain and provide detailed guidance on constructing and performing benchmark tests.

Of course, as a contract specialist, you would not normally be directly involved in benchmarking, but it might be part of the evaluation process for source selection, which might directly concern you. *Your responsibility might be to ensure that only Government personnel who are technically qualified are selected for evaluating the benchmarking.*

(continued on next page)

8.1 Types of FIP Support Services *(continued)*

Live Test Demonstrations (LTDs)

Live test demonstrations (LTDs) are another FIP support service which may be required by an agency. The purpose of a LTD is to select only those tests and demonstrations which are really necessary for validation of a system, and to do so at a low or acceptable level of risk. Those parts or components which are NOT tested or demonstrated may be *certified by the contractor*, in lieu of time-consuming and expensive testing.

LTD Example

For example, suppose an agency is acquiring a large automated personnel accounting system. The system will use commercial-off-the-shelf (COTS) IBM-compatible terminals, available from the GSA nonmandatory FIP schedule. The agency program staff determines that there is no need to fully test the terminals, because they have been on the market and much is known about them. Therefore, the risk of NOT testing each terminal individually is very low. Instead, the agency will accept certification of performance and design specifications from the manufacturer.

However, suppose the terminals will be connected into a one-of-a-kind system, and use a special software. In this simple example, the agency may elect to use a LTD. For the terminals, the agency may elect to accept contractor certifications, but require certain LTDs for validation of the terminals running the software and the *connectivity* to make sure *that all the components operate as a system*.

LTD and Nondevelopmental Items

Live testing demonstrations are often favored in order to save time and money when acquiring so-called “nondevelopmental” items. Nondevelopmental items are those previously-developed items, including those commercially available in the market place. The theory is that since nondevelopmental items have already been extensively tested, there is no need to spend Government funds on further tests, as you would on a developmental item. So, nondevelopmental items (including FIP resources) can usually be acquired faster and more cheaply than developmental items. *COTS are a subset of nondevelopmental items.*

DFAR 210.002

In fact, DFAR 210.002 explains that “*DoD policy is to fulfill requirements for supplies through acquisition of nondevelopmental items to the maximum extent practicable.*”

(continued on next page)

8.1 Types of FIP Support Services *(continued)*

Caution on Use of LTD

However, you should be careful because in recent years, some DoD FIP resources acquisitions have run into problems during validation, because some COTS components (such as computer terminals) were NOT adequately tested for connectivity and operation as part of a system. That is, they worked separately as off-the-shelf or stand alone items, but when they were linked to form a unique system, the system did not operate as intended.

This can be crucial, because even if individual components (such as computer terminals) have been proven in the market place, that is no guarantee that all components will function together *as a system*. Therefore, an agency may require an independent contractor to recommend and perform LTDs, such as tests of connectivity and implementing interfaces, to validate total system operation.

DoD-Related Acquisitions of FIP Support Services

For DoD-related FIP resources acquisitions, it is recommended that you also check the DoD 5000 Series Regulations and service-specific regulations. For example, AR 25-1 discusses the overall Army Information Resources Management Program. The DoD 5000 Series of Regulations provides guidance on Defense Acquisition Management Documentation and Reports.

Development of Evaluation Criteria

Development of evaluation criteria is another example of a FIP support service. It may be required by an agency prior to the acquisition of a new FIP resource. In some cases, it may not be clear to agency technical personnel just which technical criteria would be used to evaluate offers. Outside experts can provide assistance in developing such technical evaluation criteria, both for the evaluation of proposals and for use in final acceptance from the winning offeror after award.

(continued on next page)

8.1 Types of FIP Support Services *(continued)*

Maintenance Services

Maintenance services include examination, testing, repair, or part replacement functions performed on FIP equipment or software. Maintenance services can include both preventive maintenance (performed on site) and repairs (performed on site or at the contractor's facility). Maintenance services can also involve extensive *diagnostics and troubleshooting*, to ensure the hardware and/or software is operating correctly. Some diagnostics can even be done remotely, using special software that examines signals over telephone wires, without a technician physically visiting a facility.

Note that maintenance services are a very special example of FIP support services. (For more information on maintenance services, see Chapter 9, "Acquiring Maintenance Services.")

Training

Another type of FIP support service that is commonly requested is training. An agency may request training either for:

- initial certification of Government personnel to operate new hardware/software
- or
- "refresher" training after the FIP resource has been installed for some time

FIRMR Bulletin C-32 (Vendor provided FIP training) contains broad guidance on training. It provides general information on assistance available, types of FIP training, general considerations on vendor-provided training, and alternative sources.

Software Development and Integration Services

A final example of FIP support services you may encounter is software development and integration, which can be very difficult. In those cases where an agency wishes to develop, modify or otherwise integrate software, it is often necessary to acquire outside professional expertise. For example, an agency may need to modify accounting software to agency requirements, but lacks the specific programming and software testing expertise required.

Although this type of service can be readily "contracted out," the agency should understand that there will usually be a heavy requirement for Government personnel to coordinate and test the product.

For a more detailed discussion of commercial software acquisition, see Chapter 12.

8.2 Types of FIP Testing

Introduction

You have already learned about several types of FIP support services. However, a support service not previously discussed is FIP testing. It is important enough to warrant a more complete discussion.

Need for Performance Validation and Testing

You might also require commercial FIP support services for performance validation and testing. During source selection, you may find that offerors may make very impressive claims about the capability or performance of their hardware or software. One of the problems that you may have during evaluation of offers will be the validation of offerors' claims for capability and performance. If this occurs, you might contract for testing services to perform capability validation, a special example of FIP support services.

FIRMR 201-4.001

FIRMR 201-4.001 states: “**Capability validation** means the technical verification of the ability of a proposed FIP system configuration, replacement component, or the features or functions of its software, to satisfy functional requirements. The intent is to ensure that the proposed FIP resource can provide the required functions. FIP performance requirements are not implied or measured in the validation. Examples of capability validation include:

- Operational capability demonstrations (OCDs) of the functions of the hardware, operating system, or support software
- Verification of conformance with information processing standards
- Expert examination of the technical literature supplied with the offer
- Contacts with other users of the proposed information processing resource
- Vendor certification of conformance with the functional requirements”

Unfortunately, it is often not possible to determine if claims of capability and performance are valid without some form of testing. However, reliable testing techniques have been developed and used for such validation. Also, you might require such testing prior to final acceptance of a winning offeror's hardware or software. Often, the Government may not pay for a FIP resource until it successfully completes capability validation and acceptance testing, so you should know about the four types of testing that may be required.

(continued on next page)

8.2 Types of FIP Testing *(continued)*

Test Plan

Testing can be extremely complex, so it may be necessary to require a *Test Plan, Implementation Plan, Validation Plan, or Acceptance Plan* as part of the evaluation for a FIP resource source selection. An agency might ask for commercial sources, such as a private laboratory or testing company, to help write the test plan, carry out the tests under Government monitors, or to conduct acceptance testing on hardware or software delivered by another contractor. Commercial testing might be required as part of a complex system acquisition.

You should include the test plan or validation plan as part of the source selection plan and also in the solicitation. This will inform all offerors about the tests and standards that the successful offeror must achieve.

NOTE: DoD utilizes Test and Evaluation Master Plan (TEMP).

Four Types of FIP Testing

There are four types of tests or techniques generally used for testing and validation of vendor claims for a FIP resource. All four of these types of tests can be considered to be part of benchmarking. At least one of these four types of tests is generally used for benchmarking and as part of the performance validation for source selection. You should ask the technical personnel to recommend the appropriate type for incorporation into the test plan. The type of testing selected will depend largely on the risks and the nature of the acquisition.

The four types of testing are:

- live testing
- operation and demonstrations
- analytic modeling
- hybrid methods

(continued on next page)

8.2 Types of FIP Testing *(continued)*

Live Testing

Live testing usually does not require that the software or hardware be tested on all aspects of performance and capabilities. Instead, Government technical personnel will select only certain aspects of capability and performance for testing.

For example, suppose that one requirement for a high speed printer is to operate continuously for 120 hours without shutdown for maintenance. Instead of actually operating the printer for 120 continuous hours, the test plan may specify limited testing for 24 continuous hours and acceptance of a warranty certificate from the manufacturer that the printer meets or exceeds the 120 hour requirement. This can greatly reduce the cost of testing.

Indeed, if the manufacturer is willing to *certify* meeting certain performance or capability requirements, this can greatly reduce the need and cost of testing, but at increased risk.

Operation and Demonstrations Testing

A second type of testing is the *demonstration, or operations and demonstrations test*. In a demonstration, contractor personnel demonstrate to Government experts that the FIP hardware and/or software performs as stated and meets capability and performance requirements. This type of testing is often done at the contractor's facility. Of course, the contractor will use highly qualified personnel to conduct this type of demonstration.

One variation of this is to test the hardware or software, but using Government personnel who are typical of those who will eventually operate the hardware or software. This can be done either at the contractor's facility or at a Government facility. Using Government personnel is more difficult, expensive and time-consuming, but has the advantage of determining whether Government personnel may later have problems operating the hardware or software.

8.2 Types of FIP Testing *(continued)*

Analytic Modeling

Analytic modeling is a special type of testing which uses a mathematical model of the system to represent the actual components and actions. The analytic model mimics the difficulty, speed, and other requirements that will be imposed on the “real world” FIP resource and predicts whether the real FIP resource will meet the requirements.

For example, suppose an agency has a performance requirement to scan 5,000 pages per day. An analytic model may mimic the rate of input, total daily traffic and rate of output for a computer system and predict that the “real world” system will (or will not) meet the requirements for speed.

The analytic modeling may be done with pencil and paper statistical equations, or use very sophisticated software. One advantage of analytic modeling is that you can use it to see what would happen if you “overload” one part of a system. This might be too difficult or expensive to do with a real world system.

On the other hand, a disadvantage of analytic modeling is that it requires a high level of expertise to perform.

Hybrid Methods

In some cases, no one type of testing may be suitable for a specific acquisition. When this happens, it may be advisable to use *hybrid methods*, a combination of different types of testing. For example, if there is a great concern and high risk involving the central processing unit (CPU) of a computer system, then the CPU might be tested under very stringent operational testing. On the other hand, if the printers in the system are familiar, then they may be subjected only to a limited testing or demonstration or the Government might even accept the contractor’s certification of capability and performance.

Level of Risk versus Cost of Testing

In any case, the level of risk and cost of testing usually determine which type(s) of testing will be used. If the risk is higher, and cost is less important, then more stringent types of testing will be used. If the risk is somewhat lower, and cost of testing is a more important factor, then the Government will more likely accept contractor demonstrations and accept contractor performance certifications of compliance with functional specifications.

(continued on next page)

8.3 Nonpersonal Services

Requirements for
Nonpersonal FIP
Support Services

You will recall that the definition of FIP support services includes “...commercial nonpersonal services.”

Labor Categories
of FIP Support
Services

When you acquire FIP services, you are usually acquiring access to the use of contractor-owned and operated hardware and software. However, when you acquire FIP support services, you are more likely acquiring contractor labor, including personnel who may perform work at a Government facility.

There are three broad labor categories for FIP support services that you should understand. In a FIP resources acquisition, you may acquire one or all three of these categories of FIP support services. These are summarized in the following table.

(Topic continued on next page)

8.3 Nonpersonal Services *(continued)*

Labor Categories
of FIP Support
Services
(continued)

THREE LABOR CATEGORIES OF FIP SUPPORT SERVICES		
CATEGORY	EXAMPLES	REMARKS
FIP Clerical Support Services	<ul style="list-style-type: none"> • Source Data Entry 	<ul style="list-style-type: none"> • Requires clerical skills such as typing and language skills • Often a time-and-material contract
FIP Technical Support Services	<ul style="list-style-type: none"> • Conversion of computer software • Microfilming computer output • LAN management • Mainframe computer Operation • Maintenance 	<ul style="list-style-type: none"> • Requires technical training and experience
FIP Professional Support Services	<ul style="list-style-type: none"> • Analyses, special studies and reports • Consulting on acquisition planning, source selection planning, source selection and contract administration • System evaluation and recommendations • Quality Assurance (QA) • Training management • Performance and capability validation and testing 	<ul style="list-style-type: none"> • Requires professional training and extensive experience • May require advanced degrees in computer science or systems analysis

(Topic continued on next page)

8.3 Nonpersonal Services *(continued)*

Labor Categories
of FIP Support
Services
(continued)

Many times, these contractor personnel may be working on a Government facility and there can be a problem if they begin to work under direct Government supervision. Remember, contractor personnel on a FIP support services contract may provide only nonpersonal services. That means that they must work only on defined contractual tasks, under contractor supervisors and not be asked to perform personal services.

Difference
between Personal
and Nonpersonal
FIP Services

FAR 37.101

You may find that one of your concerns in the acquisition of FIP services may be the difference between personal and nonpersonal FIP services. You will recall that FAR 37.101 states that a *nonpersonal service* is one “under which the personnel rendering the services are not subject, either by the contract’s terms or by the manner of its administration, to the supervision or control usually prevailing in relationships between the Government and its employees.”

In other words, in a nonpersonal FIP support services contract, the contract personnel are not usually performing under the direct supervision and control of Government supervisors and managers.

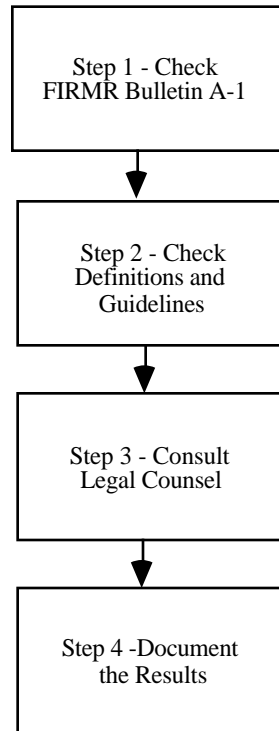
On the other hand, in a “personal services contract” (which can only be authorized by statute), the contractor personnel appear to perform like Government employees. That is, they are under the direct supervision and control of Government supervisors. This level of supervision is sometimes necessary to protect the Government’s interests. For example, if the contractor personnel will be performing a task that must be *certified* by a Government officer, then close and continuous supervision may be necessary.

(Topic continued on next page)

8.3 Nonpersonal Services *(continued)*

Difference
between Personal
and Nonpersonal
FIP Support
Services
(continued)

Remember, if you receive a requirement for acquisition of FIP support services, you will have to determine whether the requirement is for personal or for nonpersonal services. FAR 37.104 explains the guidelines that you should follow. Basically, there is a four step procedure you should follow.



Step 1
Check FIRMR
Bulletin A-1

If you receive a request for FIP support services, the first step is to check FIRMR Bulletin A-1 to determine the applicability of the FIRMR to the acquisition. You will recall that Chapter 15 presents a detailed discussion on the use of FIRMR Bulletin A-1. Whether or not the FIRMR applies, go on to Step 2 to determine if the requested services are personal or nonpersonal.

(continued on next page)

8.3 Nonpersonal Services *(continued)*

Step 2 Check Definitions and Guidelines

The second step is to check the definitions of personal and nonpersonal services in FAR 37.101 (definitions) and 37.104 (contracting officer responsibilities). Check the requested FIP support services against the definitions and guidelines.

Remember, the key difference between personal and nonpersonal services is the employer-employee relationship between the Government and the contractor personnel. The following decision table may help you make the determination.

If...	Then...	Otherwise...
<ul style="list-style-type: none"> • The contractor's personnel will be directly supervised and managed in a relatively continuous manner that makes them appear to be, in effect, Government employees... AND/OR <ul style="list-style-type: none"> • Contractor performance will be on a Government site... AND/OR <ul style="list-style-type: none"> • Principal tools and equipment will be furnished by the Government... AND/OR <ul style="list-style-type: none"> • The services are applied directly to the agency's main mission... AND/OR <ul style="list-style-type: none"> • Comparable services are performed using Civil Service personnel... AND/OR <ul style="list-style-type: none"> • The need for this FIP support service can last beyond one year... 	<p>The request is probably for a personal services contract.</p>	<p>The request is probably for a nonpersonal services contract.</p>

(continued on next page)

8.3 Nonpersonal Services *(continued)*

Step 3
Consult Legal
Counsel

If you are unable to determine whether the required FIP support services might be personal, ask the contracting officer, or refer the matter to legal counsel, if necessary.

Step 4
Document the
Results

Finally, once you have made a determination that the FIP support services will be nonpersonal in nature, document the results in case a question arises later. If you determine that the FIP support services will be personal in nature, explain to the requiring agency that is not permitted unless authorized by statute and that they must revise the technical requirements to comply with the provisions of a nonpersonal contract.

8.3 Nonpersonal Services *(continued)*

Determining
Personal Services

Ask the following questions to determine if the required services are or are not personal in nature.

1. Why cannot Government personnel be used to perform the required services? Explain.
 2. Are the services continuing, short term or intermittent? Explain
 3. To what extent do the services represent a discharge of functions which require the exercise of personal judgment and discretion on behalf of the Government?
 4. Does the Government specify the qualifications of, or reserve the right to approve individual contractor employees? If yes, explain.
 5. Does the Government reserve the right to assign tasks and/or prepare work schedules for contractor employees? If yes, explain.
 6. Is the contractor undertaking a specific task that is definable at the inception of the contract, or at some given point in time, or is the work defined on a day-to-day basis?
 7. Will payment be for end results accomplished or according to time worked? If according to time worked, are there milestones which must be reached before payment is authorized?
 8. To what extent is the Government to furnish office space, facilities, equipment and/or the supplies necessary for contract performance?
 9. Are the services clearly defined in terms of an end product or final results to be achieved? If yes, explain.
 10. Can the contractor employees be used interchangeably with Government personnel to perform the same functions? If yes, explain.
 11. Are the contractor employees in any way integrated into the Government's organizational structure? If yes, explain.
-

8.4 FIPS PUBS and Federal Standards for Testing of FIP Resources

Special References for Developing Tests

The development of valid tests for the test plan or acceptance can be very demanding. Of course, these tests are developed by highly-qualified technical personnel. These personnel may be Government employees from the program office, or you may be required to obtain expert assistance from commercial sources. In any case, you must be confident that the technical personnel who develop the tests refer to certain references to insure compliance with acquisition policies. At a minimum, you should recommend that test developers refer to the following special references for testing of FIP resources, and they should use the FIPS PUBS and standards in testing.

Special References for Developing Tests

FIRMR Bulletin B-1, *Electronic Records Management*. This FIRMR bulletin does NOT specifically explain how to develop tests, but it provides guidance on the creation, maintenance, use, and disposition of electronic records. This includes guidance on selection and maintenance of electronic records storage media, and other key aspects. Any realistic test involving electronic records management should at least meet the guidance in this bulletin.

GSA Handbook, *Federal ADP and Telecommunications Standards Index*. This GSA handbook provides guidance on ADP and telecommunications standards for FIP resources. This includes national (U.S.) and international standards which may be used in solicitations and can be very useful in writing a test plan. Note that this index is now available in both paper and CD-ROM versions from:

Superintendent of Documents
U. S. Government Printing Office
Washington, DC 20402
(202) or FTS 783-3238

FIRMR Bulletin C-4, *Performance and Capability Validation of FIP Systems*. This is the basic reference for anyone developing tests for capability and performance validation. It provides guidance on selecting and using performance and capability validation techniques in acquiring FIP systems.

FIRMR 201-20.304, *Capability and Performance Validations*.

(Topic continued on next page)

8.4 FIPS PUBS and Federal Standards for Testing of FIP Resources *(continued)*

Special
References for
Developing Tests
(continued)

FIPS PUB 75, *Guidelines on Constructing Benchmarks for ADP System Acquisition.*

GSA/KEES, *Use and Specifications of Remote Terminal Emulation in ADP System Acquisition.*

FIPS PUB 101, *Guidelines for Lifecycle Validation, Verification, and Testing Computer Software.*

NIST Special Publication 500-113, *Assessment of Techniques for Evaluating Computer Systems for Federal Agency Procurements.*

NIST Special Publication 500-118, *A Guide to Performance Evaluation of Database Systems.*

NIST Special Publication 500-123, *Guide on Information Workload Forecasting.*

FEDSIM Publication, *Proceedings of the Symposium on Benchmarking and Alternatives.*

Information and
Assistance from
GSA

Of course, it is not likely that test developers will need every one of these special references for every test to be developed. Nevertheless, you should encourage the use of these special references.

In addition, if technical personnel require assistance or more information, tell them to contact:

General Services Administration
Office of Technical Assistance (OTA)
5203 Leesburg Pike
Falls Church, VA 22041
(703) or FTS 756-4100

8.5 Appropriate Use of DIDs in a FIP Resource Acquisition

Data Item Descriptions (DIDs)

DoD Standard 963A, Preparation of Data Item Descriptions (DIDs) explains DIDs. A DID (DD Form 1664) is a completed form that defines the data required of a contractor. The form specifically defines the data content, preparation instructions, format, and intended use.

DIDs are available for virtually every type of data that might be required of an offeror or contractor in an acquisition. For example, there are DIDs which govern operator's manuals, maintenance manuals, computer software data code, and many other types of data or documentation that might be required from a contractor, such as a "Final Test Report."

The DoD agencies have extensive experience in using DIDs in solicitations. The advantage of using DIDs in a solicitation is that they have stood the test of time and proven very useful in providing very specific instructions to offerors. The use of DIDs can thus help both the Government and the offerors to reduce misunderstandings of data requirements in a complex FIP support services acquisition.

Although they are widely used within DoD, you can also cite DIDs for civilian agency acquisitions, if they are appropriate. For example, if a solicitation will require testing and delivery of certain documentation and data, it might be appropriate for you to require compliance with one or more DIDs.

The key is to make sure that the use of DIDs is really appropriate. This requires that you check applicable DIDs to see if the existing DIDs are appropriate and can be used "as is" or with slight changes, instead of writing new guidelines from scratch for the contractor to follow.

NOTE: Contract Data Requirements Lists (CDRL) are usually used with DIDs (DD Form 1423). FIP PUBS and Standards are usually listed on the CDRLS.

Example of DID

For example, suppose the acquisition was for a highly complex software to be developed solely for Government purposes. In this case, you might contract to a commercial source to develop the evaluation criteria and you might use a DID to check human factors engineering criteria.

An example of such a DID is on the next page.

(Topic continued on next page)

Example of DID

DATA ITEM DESCRIPTION			Form Approved OMB No. 0704-0188	
2 TITLE HUMAN ENGINEERING TEST PLAN		1 IDENTIFICATION NUMBER DI-HFAC-8XXXI		
3 DESCRIPTION / PURPOSE 3.1 This plan details the proposed testing to demonstrate that the personnel-equipment/software combination can accomplish the intended operation and maintenance functions in accordance with system specification. This plan serves as the principal means of planning for validation of human performance requirements, accuracy of personnel criteria, adequacy of training, and acceptability of design of the personnel-equipment/software interface.				
4 APPROVAL DATE (YYMMDD) 880701	5 OFFICE OF PRIMARY RESPONSIBILITY (OPR) MI	6a DTIC APPLICABLE	6b GIDEP APPLICABLE	
7 APPLICATION/INTERRELATIONSHIP 7.1 This DID contains the format and content preparation instructions for the Human Engineering Test Plan (HETP) resulting from the work task described by 3.2.3.1 of MIL-H-46855B. 7.2 This DID is applicable to the acquisition of military systems, equipment, and facilities. 7.3 It is not intended that all the requirements contained herein should be applied to every program or program phase. Portions of this DID are subject to deletion tailoring depending upon the program phase in which it is applied in the solicitation/contract.				
8 APPROVAL LIMITATION		9a APPLICABLE FORMS		9b AMSC NUMBER A3058
10 PREPARATION INSTRUCTIONS 10.1 <u>General</u> . The Human Engineering Test Plan (HETP) shall document in detail the contractor's plan for gathering and analyzing data to show that the system, when fielded, will satisfy four criteria: a. All human performance requirements for operations and maintenance can be performed to an acceptable level or standard under conditions of expected use; b. The human performance requirements for operations and maintenance can be performed reliably by personnel reasonably representative of the military personnel who will ultimately perform them; c. Both the cost (in terms of all resources required) and some measure (based on human performance time and error data) of prospective effectiveness of the contractor's training program for operations and maintenance are known; and d. The design of system hardware and software facilitates efficient, safe, and accurate human performance. 10.2 <u>Content requirements</u> . 10.2.1 <u>Introductory information</u> . Introductory information shall include the following: a. Title descriptive of each test to be conducted. b. Identification of equipment (or concept) being tested.				
11 DISTRIBUTION STATEMENT DISTRIBUTION STATEMENT A: Approved for public release; distribution is unlimited.				

Example of DID (*continued*)

DOD-STD-963A
DI-HFAC-8XXX1

Block 7, Application/Interrelationship (Continued)

7.4 This DID is related to DI-HFAC-8XXX2, Human Engineering Program Plan, DI-HFAC-8XXX3, Critical Task Analysis Report, and DI-HFAC-8XXX4, Human Engineering Test Report.

7.5 This DID supersedes DI-H-7053.

Block 10, Preparation Instructions (Continued)

- c. Statement of the task groups (or portions thereof) being reported.
- d. Purpose of tests.
- e. Objective(s) of tests (if different from subparagraph d. above).

10.2.2 Test design. Identification of test conditions, performance measures, sample sizes, and sequence of test events.

10.2.3 Test methods and controls. Description of procedures to be followed in conducting each test. Explanation of how environmental variables and other factors which could affect the performance measures will be controlled or described, including where relevant:

- a. Noise.
- b. Illumination level.
- c. Shock and vibration.
- d. Air temperature and humidity.
- e. Ventilation.
- f. Exposure to toxic or hazardous substances.

10.2.4 Test participants. General description of the personnel population from which test participants will be selected. Identification and justification of test participant selection criteria. Identification of methods by which data describing actual test participants will be gathered, including, where relevant:

- a. Age.
- b. Weight.
- c. Sex.
- d. Body dimensions relevant to performance tasks.
- e. Visual acuity.
- f. Hearing level.
- g. Existence of physical disabilities.
- h. Educational and work experience.
- i. Prior experience relevant to performance tasks.

SUMMARY

In this chapter, you learned to distinguish between and explain with examples the various types of FIP support services. In the next chapter, you will learn to identify and explain the special characteristics affecting maintenance services, including equipment, software, and telecommunications.

CHAPTER 9

ACQUIRING FIP MAINTENANCE SERVICES

Chapter Vignette

“Okay,” said Mark, “I understand that FIP support services are a part of all FIP services. However, I have some questions about maintenance services. It seems to me that they are among the most common of the FIP support services, because the Government cannot keep training its own maintenance personnel every time it buys a new computer or other type of FIP hardware, software, or telecommunications.”

“You are right,” said Marcia. “Maintenance services are a special case among the FIP support services. FIP maintenance has certain special characteristics, certain methods for acquisition, and certain payment methods.”

Course Learning Objectives

At the end of this chapter, you will be able to:

Overall:

Generalize the special characteristics affecting maintenance services, including equipment, software, and telecommunications.

Individual:

- 9.1 Explain that FIP maintenance services are a subset of FIP support services.
- 9.2 Explain the categories of FIP Maintenance Services
- 9.3 Identify types of maintenance services.
- 9.4 Explain the sources for obtaining FIP Maintenance Services
- 9.5 Explain methods for obtaining maintenance services.
- 9.6 Generalize special characteristics affecting maintenance services.
- 9.7 Explain payment methods for maintenance services.

Chapter Overview

Scope

This chapter discusses the special characteristics of FIP maintenance services. It will explain that maintenance services are a subset of support services, the categories of FIP maintenance services, types of FIP maintenance services, sources and methods for obtaining maintenance services, and payment methods for maintenance services.

As a contract specialist, you are not expected to be an expert in FIP resource maintenance, however, you should ensure that:

1. The requiring activity or program office has at least considered maintenance requirements and costs across the expected system life cycle, to include consideration of any special factors;
2. Maintenance requirements are described functionally in the requirements analysis; and
3. A tracking system is established in the contract administration phase, with key persons designated to maintain records, contact the maintenance contractors and monitor performance.

Finally, you are reminded that the GSA also provides assistance on FIP resource maintenance matters. GSA's Office of Technical Assistance (OTA) can be reached by calling FTS 756-4100, or (703) 756-4100.

Topics in This Chapter

This chapter includes the following topics:

SECTION	TITLE	PAGE
9.1	FIP Maintenance Services As a Subset of FIP Support Services	9-5
9.2	Categories of FIP Maintenance Services	9-7
9.3	Types of FIP Maintenance Services	9-12
9.4	Sources for Obtaining FIP Maintenance Services	9-15
9.5	Methods for Obtaining FIP Maintenance Services	9-18
9.6	Special Characteristics for FIP Maintenance Services	9-21
9.7	Payment Methods for FIP Maintenance Services	9-26

(continued on next page)

Chapter Overview *(continued)*

References

In order to understand the topics in this chapter, it is recommended that you have the following references on hand:

- FIRM 201-4.001, *Definitions and Acronyms*
 - FIRM Bulletin A-1, *Applicability*
 - FIRM Bulletin C-27, *Reuse of Outdated FIP Equipment*
 - the GSA Guidebook (“A Guide for Acquiring Maintenance Services”).
-

9.1 FIP Maintenance Services As a Subset of FIP Support Services

Introduction

FIRMR 201-4.001

This chapter discusses the topic of acquiring FIP maintenance services, particularly for hardware, but also for software. You may recall that FIRMR 201-4.001 defined FIP maintenance as “those examination, testing, repair, or part replacement functions performed on FIP equipment or software.”

You can think of FIP maintenance services as a **subset** of FIP support services. That means that FIP maintenance services are a part of the overall FIP support services. In fact, you may recall that the definition of FIP support services “means any commercial nonpersonal services, including FIP maintenance, used in support of FIP equipment, software, or services” (FIRMR 201-4.001).

Many large scale FIP resource acquisitions include the acquisition of maintenance services, often over the life cycle of the equipment. Maintenance services may also be acquired separately. Maintenance services may be acquired from the original equipment manufacturer (OEM) or from third party vendors who specialize in such services.

Consequently, you may require maintenance services either as part of the original acquisition or as a separate requirement years after the acquisition and installation of FIP resources.

Examples of FIP Maintenance

FIRMR Bulletin A-1 provides the following examples of FIP maintenance: preventive and remedial equipment diagnostic and repair services, a field engineering change or field modification to FIP equipment, and modifications to FIP software.”

Examples of Non-FIP Maintenance

However, you should understand that not all maintenance of computer equipment is necessarily FIP maintenance. For example, if a FIP equipment item, such as a computer is “embedded” in another item of equipment, then the repair is not considered FIP maintenance. For example, repair of a small computer embedded in a “smart” elevator system is NOT FIP maintenance.

However you acquire maintenance services, they represent a special aspect of FIP resource acquisition, with special considerations to be observed if the acquisition is to be successful.

9.1 FIP Maintenance Services As a Subset of FIP Support Services *(continued)*

Categories of Maintenance Services

Maintenance services include several specific categories which you should understand. Two categories or levels of maintenance services, usually associated with FIP hardware are:

- **Preventive Maintenance.** Regularly scheduled activities to keep hardware in good operating order (e.g., cleaning parts, removing dust, replacing worn parts).
- **Remedial Maintenance.** Determining why equipment is malfunctioning (troubleshooting and diagnostics) and repairing it, including replacement of broken parts.

Note that preventive maintenance (PM) services are performed **BEFORE** a breakdown occurs, and remedial maintenance services are performed **AFTER** a breakdown occurs.

EITHER type of maintenance services may be performed “in-house” or acquired from vendors. However, preventive maintenance is sometimes performed by Government personnel, such as those persons who operate the FIP equipment, while remedial maintenance requires more special training and is usually “contracted out.”

In some cases, a maintenance service, such as testing of hardware or software may be “invisible” to the agency. For example, “diagnostics and testing” is now frequently done in a “remote” mode over telephone lines where a contractor’s computer with diagnostic software “listens” to another computer and determines whether there is a defect requiring maintenance. Some new software now diagnoses hardware or other software and alerts the operator or maintenance contractor when maintenance is needed. Some software can even provide a “bypass” or “detour” to permit continued system operation until the maintenance problem is eliminated.

9.2 Categories of FIP Maintenance Services

FIP Maintenance Services	You have already learned that FIP maintenance is, broadly speaking, a subset of the overall FIP support services (see Chapter 8, “Acquiring FIP Support Services”).
Categories of Maintenance Service	You have already seen that there are two broad categories or levels of FIP services, <i>Preventive</i> and <i>Remedial</i> . Each of these types has certain special characteristics.
Special Characteristics of Preventive Maintenance Services	<p>Preventive maintenance (PM) is maintenance services applied during and between operations to keep the hardware or software operating properly. Often, preventive maintenance is scheduled to be performed after so many hours, days, weeks, or months of operation. In fact, preventive maintenance is sometimes referred to as “scheduled maintenance.”</p> <p><i>A major goal of preventive maintenance is to prevent or postpone the need for more expensive remedial maintenance services.</i></p> <p>Note that preventive maintenance is performed whether or not there has been a complaint or breakdown. Examples of preventive maintenance include tasks such as cleaning, lubricating, testing and calibration. Preventive maintenance can usually be delayed or scheduled around periods of operation.</p>
Determining What Maintenance Services Will be Required	<p>The requiring activity or program office should determine the need for FIP maintenance early on in the requirements analysis. Unfortunately, the requiring activity may overlook realistic FIP maintenance requirements and costs over the system life cycle. As FIP resources age, they typically require more maintenance for both hardware and software. Such maintenance costs can become unacceptably high near the end of the system life cycle.</p> <p>You should therefore be ready to ask technical and program personnel which FIP maintenance services will be required and whether projected maintenance requirements and costs are realistic.</p>

(continued on next page)

9.2 Categories of FIP Maintenance Services *(continued)*

Describe FIP
Maintenance
Requirements
Functionally

As with hardware or software, the requiring activity should describe the FIP maintenance requirements functionally. If there is a particular reason to ask for a maintenance contractor by name (such as a sole source) this must be fully justified and approved.

When Not to
Require PM

One major goal of preventive maintenance is to prevent more costly remedial maintenance later on. For this reason, vendors may offer a “preventive maintenance contract” or warranty package which includes periodic preventive maintenance. Although PM can be useful in prolonging equipment life and minimizing repairs, it does not always make good sense. For example, some items of equipment are not meant to be opened for maintenance by the user. If you try to perform PM on such items, you can actually end up damaging the item, rather than maintaining it. The following decision table shows when it may NOT be cost-effective to require PM in a FIP resource maintenance contract.

If...	Then...
<ul style="list-style-type: none"> the equipment was designed as “throw-away” the item is slated for replacement and has no useful purpose at the end of current use the item has a high failure rate and it is no longer feasible to continue it in operation the item costs less than \$500 	<ul style="list-style-type: none"> preventive maintenance is NOT cost effective and should NOT be included in the maintenance contract

High Maintenance
Costs and
Obsolescence

FIRMR Bulletin C-27 warns that if an increasingly higher portion of the overall operating costs is being applied toward the maintenance of FIP equipment, it may be a sign that the FIP equipment may be becoming obsolete and it should be replaced.

9.2 Categories of FIP Maintenance Services *(continued)*

“Unscheduled” Maintenance Services

Remedial maintenance is sometimes also referred to as “unscheduled” maintenance services and include all actions taken to restore the FIP equipment to proper operating condition. Usually, remedial maintenance services are more serious and complex and require more time, and are usually much more expensive, because they cause an operation to slow down or shut down. In extreme cases, the equipment cannot be repaired on site and must be removed and shipped to the manufacturer for complex repairs.

Examples of remedial maintenance include removal and replacement of parts (such as computer chips or mother boards), diagnostics and troubleshooting, and repair of damaged components. Remedial maintenance is often of an emergency nature and may disrupt the agency’s mission and operations. Normally, parts replaced under remedial maintenance becomes property of the contractor. The contractor then “refurbishes” or “rebuilds” these parts for later use. This procedure can help control costs for the Government.

Delays in FIP Maintenance Services

If remedial maintenance is delayed for more than a few days, there may be severe damages in lost time and lost productivity. You can imagine an office where a LAN or mainframe computer breaks down. Literally hundreds of people may be unable to do their work until it is repaired. For this reason, maintenance contracts usually include one or more special clauses as an incentive to the contractor to perform the repairs quickly. These clauses relate to the calculation and deduction for downtime credits.

For example, a breakdown in a FIP resource can be especially serious during peak business hours. For this reason, an agency or program office may be willing to pay more for a quick maintenance response by a contractor. Remember the shorter the response time, the higher the cost for maintenance.

The agency or program office should not offer special payments or incentives for contractor performance of routine, or scheduled maintenance (such as preventive maintenance) that can be scheduled around the normal business hours.

(continued on next page)

9.2 Categories of FIP Maintenance Services *(continued)*

Costs of Delays in Maintenance

There are several terms one must understand in order to obtain the most economical maintenance for your customer. These terms are described below.

Definitions

There are two periods of time for maintenance:

- **Principal Period of Maintenance (PPM)** —defined as normal business hours worked by the specific operation (e.g., 8 A.M. to 5 P.M.) plus one hour for lunch, or hours required for the specific operation.
- **Other Than Principal Period of Maintenance (OPPM)**—defined as any other than PPM. This type of maintenance normally costs more.

In addition, there are also some differences in how “time” is defined.

- **Repair Time-** is the actual time required to repair a FIP resource from the time that repair actually begins until the resource is returned to service.
 - **Response Time-** is the period of time in which a maintenance contractor must respond to an agency’s call for service. The time allowed is specified in the contract. The shorter the response time normally results in greater cost.
 - **Down Time-** is the period of time during which a FIP resource is not available due to malfunction, maintenance, or other causes. This can include repair time.
-

(continued on next page)

9.2 Categories of FIP Maintenance Services *(continued)*

Additional Maintenance Functions Performed by Contractors

In addition to the regular functions associated with remedial maintenance, contractors may offer additional associated services. These may include configuration management, inventory control, maintenance training, installation and movement, hot line/help desk, and other related services, such as media maintenance. A requiring agency may have a need for one or more of these maintenance services.

- *Configuration management* includes configuring, and providing advice on, the configuration and layout of FIP systems. This is not solely a maintenance service, but does include maintenance considerations. Sometimes, the addition of a new component, such as an incompatible file server, can create operations and maintenance problems. Configuration management can reduce or eliminate these kinds of problems, ensure compatibility and reduce future maintenance costs.
- *Inventory control* can include keeping track of all elements of large systems, including special repair parts (such as chip “boards”) by serial number, as to status and location. This is usually done with automated data bases.
- *Maintenance training* is often provided when Government personnel are required to provide maintenance of equipment for security or other reasons when maintenance contractors may not be available.
- *Installation and movement* is a special maintenance task which is offered by some maintenance contractors. Some even specialize in the area of computer relocation and reinstallation. This type of maintenance service can be done on week ends or after hours to minimize down time or interruption of the agency’s mission.
- *Hot lines and help desks* are commonly provided by large maintenance contractors, including OEMs, to give assistance to customers over an 800 number or other reserved line. In some cases, this service is available 24 hours per day, seven days a week, year round.

9.3 Types of FIP Maintenance Services

Types of FIP Maintenance Services

Regardless of the category of FIP maintenance you obtain, there are some options (types), you should keep in mind when obtaining FIP maintenance services. These can make a great deal of difference in the effective performance of the hardware (equipment) and software during the entire life cycle of the FIP resources. These include:

- “swapping” units or boards
- refurbishment
- repair and return

Swapping Units or Boards

Because remedial maintenance services can be so disruptive, many maintenance contracts include a provision for the contractor to swap items, or provide *substitute equipment* during the time that the original equipment is under repair. This allows the using agency to continue with the original work with a minimum of downtime.

A substitute equipment clause can work well when there are many items of the same type of equipment, such as identical computer terminals in a large agency. The contractor can stock extra replacement terminals and quickly unplug and remove a defective terminal for repair and replace the defective terminal in minutes.

However, substitute equipment clauses are not as useful when there are only a few items of equipment, such as a one-of-a-kind main frame computer. In such a case, it is not reasonable to expect that the vendor will keep an entire large computer on hand and remove the defective computer for repair. Swapping of some units can be expensive. However, the contractor may quickly remove and replace key modules. For larger computers, it is usually more economical to “swap boards” and replace only the malfunctioning part.

Modular Design

Fortunately most large computers, such as mainframes, are now increasingly designed for ease of maintenance. This includes modular design so that a failed or broken component can be quickly replaced on site while the broken component is removed and returned to a factor maintenance shop for repair. Boards for immediate replacement are often kept on-site at some Government main frame facilities.

This system of repair may also be used for some components such as large disk drives, printers, and scanners.

(Topic continued on next page)

9.3 Types of FIP Maintenance Services *(continued)*

Modular Design (continued)

Remember, the use of a substitute equipment clause is not automatic. The requiring agency should request this type of clause only when there is a real need, not just for convenience. Also, the offeror will have to include into the cost proposal structure the added price of maintaining spare or extra components to substitute for those that are down for maintenance.

Also, the use of a substitute equipment clause is useful only when the equipment exists in the market place in sufficient quantity to make this practice feasible. For example, it is feasible to ask for substitute equipment for smaller computers and components like disc drives. There are many of these available, and they can be easily transported and quickly replaced.

Refurbishment

A second option for maintenance service that you should understand is refurbishment. Refurbishment is the complete repair, renewal and updating of equipment. Originally, this could only be done at the OEM's factory or production facility. However, with the advent of new modular design, it is increasingly possible to do much refurbishment on site at the customer's facility.

During refurbishment, all components that are known or suspected of approaching the end of their useful life-cycle, such as selected computer boards, are replaced with new components. New upgraded chips and boards, such as accelerator boards, to speed up computer operations, can also be added at the same time. This can extend the useful life of the equipment and prevent some future malfunctions.

Many manufacturers now design expandability into their products to encourage the customer to buy upgrades and occasional refurbishment.

Of course, refurbishment is not recommended unless you intend to retain the equipment for a longer period of time. It is also not recommended for equipment that is obsolete. For this reason, refurbishment is usually not recommended for FIP equipment which is of lower cost and quickly becomes obsolete. However, it may be useful for larger items, such as main frame computer systems. Before deciding on whether to refurbish a system, a requirements analysis and cost benefits analysis may be necessary. Refurbishment has its limits. A computer or system that is refurbished may still not be equal to a newer model.

(continued on next page)

9.3 Types of FIP Maintenance Services *(continued)*

Repair and Return

A third option for maintenance service you should keep in mind is *repair and return*. Repair and return is very common in maintenance contracts and normally requires the contractor to pick up the damaged item, remove it, repair it at the contractor facility (or a work space provided by the Government) and return it.

Note that this is not necessarily the same as substitute equipment. In this case, there may be no substitute for the defective item. The agency must “do without” until the item is repaired and returned.

Repair and return is suitable for standalone desktop computers, printers, and other devices which are numerous and can be spared from the agency office without harming the mission. Often there is no time limit or credit for down time and the contractor may keep the damaged item for weeks awaiting parts.

Repair and return without downtime credits is not suitable for critical FIP resources.

9.4 Sources for Obtaining FIP Maintenance Services

Sources for Obtaining FIP Maintenance Services

Another special characteristic about FIP maintenance services is the sources from which these services are obtained. You should know the major methods for obtaining such maintenance services, including OEMs and third parties. This section discusses the sources of maintenance services and the methods for obtaining these maintenance services.

Sources of Maintenance Services

The major sources of maintenance services include the original equipment manufacturer (OEM) and third party vendors.

Original Equipment Manufacturers (OEMs)

The original source of FIP maintenance, especially for new equipment and software, was the *original equipment manufacturer, or OEM*. Frequently, FIP maintenance services are acquired as part of a “package deal” when new hardware or software is obtained. Indeed, the OEM may specify in its warranty that all warranted items become void if anyone else performs any maintenance services upon the hardware or software.

Originally, when large computers were introduced and leased to the Government, the OEM was the only source for maintenance services. This provided an environment without much competition, because the OEM normally leased the computers to the Government and specified that all maintenance had to be performed by OEM personnel.

Advantages of OEM Maintenance

The advantage of using OEM maintenance is that this is usually the most technically qualified source to provide the maintenance services. The OEM often has the largest number of skilled technicians who are familiar with the equipment.

Usually OEMs have accumulated large amounts of maintenance data to predict usage rates, failure rates, and the expected useful life of many key components, such as chips, cards and disk drives. This allows the OEM to manufacture and stock the optimum number of replacement parts.

(Topic continued on next page)

9.4 Sources for Obtaining FIP Maintenance Services *(continued)*

Advantages of OEM Maintenance (continued)

Also, the OEM often develops proprietary software to diagnose or troubleshoot malfunctions. The OEM will usually not share or license this software to competitors. One example is *remote diagnostics software* which allows the OEM to diagnose some malfunctions electronically via modem without a technician on site.

Finally, in extreme cases, the OEM is usually the only source with the engineering expertise to cope with unusual or rare malfunctions.

Disadvantage of OEM Maintenance

However, the primary disadvantage of OEM maintenance services in the past has been cost. Original equipment manufacturers have often been more expensive, compared to third party vendors. OEM sources have been unable to match many of the third party vendors discounts and have lost many maintenance contracts as a result.

Third Parties

A second place for you to obtain FIP maintenance services is from *third parties*, usually those specializing in FIP maintenance. There are a number of companies which specialize in the maintenance of FIP resource hardware. These companies may even be employed as subcontractors by the OEM, for long term, multiyear follow-up maintenance work, in places such as remote sites.

Types of Third Party Vendors

There are two general types of third party vendors, “turnkey” and “integration contractors.” Of course, some third party vendors offer both types of maintenance services.

- Turnkey maintenance vendors claim expertise in all types of maintenance services, using their own personnel.
 - Integration contractors serve as prime contractors, managing the maintenance services of several maintenance subcontractors.
-

(continued on next page)

9.4 Sources for Obtaining FIP Maintenance Services *(continued)*

Advantages of Third Party Maintenance

The use of third party maintenance is often encouraged because it provides competition to original equipment manufacturers. In recent years, third party vendors have been very successful in winning maintenance contracts away from OEM sources.

Third party vendors of maintenance services often have lower overhead and are specialized in maintenance, so they can often offer lower prices and discounts. This promotes competition.

Possible Disadvantages

However, there may be several disadvantages to using third party maintenance services:

- Third party vendors may have less experience with very unusual equipment malfunctions which require OEM engineering support. This can be critical for some types of highly specialized equipment, such as TEMPEST or other security devices.
- The third party vendor will not normally have a large stock of the necessary repair parts immediately available, as will the OEM. This can cause some unacceptable delays while they obtain parts from the OEM.
- Third parties may not have access to proprietary software developed by the OEM for diagnostics and troubleshooting. This means that you may need to obtain the data rights for such software if it is essential to the maintenance requirements.

Overcoming Disadvantages

However, you may be able to overcome the disadvantages of using third party vendors through:

- Past Performance/Pre-Award Surveys - to determine if the third party vendors have a proven “track record” of good performance on similar maintenance projects, to minimize risk to the Government; and
- Requiring submission of agreements with parts suppliers as part of the offerors’ proposal, to ensure a timely supply of repair parts and minimize risk to the Government.

Violation of Warranties

Of course, if you are considering third party maintenance, you must first make certain that it will not violate any terms or conditions of the OEM warranties.

9.5 Methods for Obtaining FIP Maintenance Services

Methods of Obtaining Maintenance for Hardware

There are several methods available for obtaining maintenance. Each has certain advantages and disadvantages. The method(s) that you select for obtaining maintenance will depend on those requirements stated by the requiring agency. However, you must be prepared to explain to the agency the relative costs and benefits associated with each method.

The methods for obtaining maintenance for hardware are:

- *On-site.* The contractor will be required to maintain one or more maintenance technicians on site to respond immediately to maintenance requests. The advantage is quick response. The disadvantage is higher cost. In extreme cases, where an agency operates 24 hours per day, it may require on-site maintenance personnel around the clock.
- *On-call/Per call.* A more common, cheaper method of acquiring maintenance services is on call/per call. Under this method, the maintenance contractor responds to each call. The responding technician usually diagnoses the problem and then either repairs the malfunction or calls for additional assistance. Payment may include response time credits to encourage quick response.
- *Ship-in (also called depot).* This method of maintenance is often reserved for those types of equipment which may require detailed disassembly or repair at the OEM's factory. Examples include rewiring or repair and extensive retesting of computer boards.

(Topic continued on next page)

9.5 Methods for Obtaining FIP Maintenance Services *(continued)*

Methods of Obtaining Maintenance for Hardware (continued)

- *Carry-in.* This method is used when the vendor or contractor has stores or repair shops convenient to the Government sites. The advantage is relatively low cost, because the contractor does not have to charge for pick up and transportation costs. However, one disadvantage may be slower response time for the repair and return.

Maintenance for Software

Maintenance services for software differ somewhat from maintenance for hardware. That is because the software is usually proprietary in nature and only the originator will have access to the software program code.

Even if you obtain data rights to the software, another party may not be able to troubleshoot or diagnose problems in the software as effectively as the manufacturer. For this reason, software maintenance is usually performed by the vendor or company that wrote the software. Software maintenance usually starts with the hotline or through a problem report.

Maintenance for Telecom- munications

Maintenance services for telecommunications are also normally provided by the original vendor. That is because the user really purchases access to an operating telecommunications system, with proprietary hardware and software, which remains under the control of the vendor/system operator. The telecommunications system is designed with much “redundancy” to bypass malfunctions and continue uninterrupted service to the user. In most cases, the user will not even know if a system malfunction has occurred.

Telecommunications vendors already have an elaborate maintenance support system in place, which is largely “invisible” to the user. The telecommunications company monitors the quality of the service through computers and software which remain largely invisible to the user. In most cases, except for installation, the user never sees telecommunications maintenance personnel. In many cases the only maintenance interface users have with the system is to provide complaints.

(continued on next page)

9.5 Methods for Obtaining FIP Maintenance Services *(continued)*

Handling Complaints

For example, the FTS 2000 telecommunications system operated by Sprint has an established maintenance support system called the Trouble Handling Information System (THIS), set up to receive and handle complaints. The most common types of complaints handled by the telecommunications maintenance system include:

- Access problems - when a user cannot enter a telecommunications network, for example when attempting a long distance call;
- Connectivity problems - when a user cannot complete calls, usually hearing only a fast busy signal; and
- Quality problems - such as when a call goes through, but there is static or echoes on the line.

Once a complaint is received, the telecommunications company is supposed to correct the problem as quickly as possible, often without having to contact the customer again.

Typically, the telecommunications maintenance is therefore purchased as part of the total telecommunications “package,” and instructions on maintenance are provided to the using agencies. In the case of FTS 2000, the procurement of telecommunications was done by GSA for all using agencies.

Monitoring Maintenance Contractors

Regardless of the types of FIP maintenance services required, it is essential to establish an internal structure to monitor the maintenance contractor(s) during the contractor administration phase. Usually, a COTR or other key persons will be designated as the special points of contact for this purpose. Only these designated persons should have direct contacts, such as requests for maintenance, with the maintenance contractors. These key persons alone should be responsible for such duties as

- keeping records of breakdowns and nonavailability of FIP resources;
- contacting the maintenance contractor(s);
- ensuring requested maintenance was performed; and
- reporting to the contracting officer any problems which are contractual

Unless FIP maintenance contacts are controlled in this manner, it is possible that the Government may incur unnecessary maintenance costs. For example, a contractor may charge for extra, unnecessary, or unauthorized calls for maintenance.

9.6 Special Characteristics for FIP Maintenance Services

Performance
Failure
Alternatives

Additional special characteristics of FIP maintenance services are:

- credits for downtime, including *response time credits*; and
- *liquidated damages*.

Credits for
Downtime

The first method for collecting compensation for FIP maintenance service problems is *credits for downtime*. Under this method, the maintenance contract will contain a clause which specifies how long equipment can be “down” or inoperable, such as “...not to exceed 12 hours,” or “...not to exceed one working shift of eight continuous hours.”

If the maintenance contractor does not repair the equipment within the specified time limit (such as within eight hours), the Government may collect a credit, which can be used to reduce the overall maintenance cost.

The credit will usually be computed on an hourly basis as a percentage of the monthly maintenance cost.

Response Time
Credits

One version of the “credits for downtime” method is sometimes called “response time credits.” *Response time* is that period of time that passes between contractor notification and the arrival on-site of maintenance personnel.

Response time credits is a method which awards credit to the Government if the contractor does not respond to a call for maintenance within a specified time. This provides a strong incentive for the contractor to respond as quickly as possible to maintenance calls.

9.6 Special Characteristics for FIP Maintenance Services *(continued)*

Monitoring for Credit

The key to successful use of credits for downtime or response time in a maintenance contract is careful monitoring for credit, good record-keeping and careful reconciliation with the maintenance records. This means that you must brief the COTR to establish a monitoring system to capture and keep track of maintenance calls, down time and response times.

Importance of Monitoring for Credit

Note that if you decide to use a “credit for downtime” clause in a maintenance contract, you should ensure that the using agency will have an effective system to monitor the exact beginning and end of all down time. This is especially important for a “response time credits” clause, because the maintenance contractor may dispute the arrival times unless the Government keeps good records.

This places a special demand on the Contracting Officer’s Technical Representative or other technical personnel who monitor contractor performance.

This usually includes a special log or report, such as a *Malfunction Corrective Action Report*, which must be completed immediately following any equipment malfunction. This report must be explained in the contract and checked each month against the contractor’s records to resolve any discrepancies.

Example of Malfunction Corrective Action Report

An example of a Malfunction Corrective Action Report is shown on the following page. Note that the actual format may vary from one agency to another, but the form should contain at least the information shown on this example. This type of report is a vital part of the tracking system to determine FIP maintenance requirements and costs.

(Topic continued on next page)

9.6 Special Characteristics for FIP Maintenance Services *(continued)*

Example of
Malfunction
Corrective Action
Report
(continued)

Malfunction Corrective Action Report (Example)	
Date and Time Maintenance Requested	_____
Date and Time Maintenance Personnel Arrived	_____
Date and Time Equipment Returned to Service	_____
Type and Serial Numbers of Equipment	_____

Description of Malfunction	_____

Cause	_____
Repairs Made	_____

Parts Replaced	_____

9.6 Special Characteristics for FIP Maintenance Services *(continued)*

Contractor Records

While the COTR and other Government personnel are maintaining a Malfunction Corrective Action Report, the contractor will be keeping records also. These contractor records will include the type of information the contractor needs to support its billings and invoices for maintenance. This information will usually include:

- Time of occurrence
 - Response time
 - Time spent (labor-hours) restoring the system to full operation
 - Cause of malfunction
 - Parts and materials expended (and costs)
-

Reconciling Records and Reports

You can see that there can be a problem if the contractor's maintenance records do not match those kept by the Government COTR and technical personnel. For this reason, it is important that you instruct the COTR to keep careful records and reconcile the Government's reports with those of the contractor, at least monthly. This is part of his/her responsibility for tracking contractor technical performance as part of contract administration. Through receipt of performance reports, the COTR authorizes payment of the contractor.

Liquidated Damages

A second method for collecting compensation for FIP maintenance service problems is *liquidated damages*. You may decide to insert a clause for liquidated damages in a solicitation if there is a danger that the damage suffered by the Government due to contractor negligence will exceed the maintenance credits.

For example, suppose a maintenance contractor fails to respond to a call requesting maintenance within the timeframe specified in the contract, i.e., 5 full working days. Even if there are response time credits, these may not fully cover the cost to the Government in lost hours, inconveniences and other damages. However, in this case, the Government might invoke a liquidated damages clause to recover damages.

(Topic continued on next page)

9.6 Special Characteristics for FIP Maintenance Services *(continued)*

Liquidated
Damages
(continued)

FAR 12.204 FAR 52.212-4

You must follow the guidance in the FAR.

Note that if you decide to utilize a liquidated damages, clause you must clearly specify this in the contract, along with the specific formula that you will use to calculate the damages. The formula must cover only those damages directly related to the damages suffered and may not be punitive.

Again, the Contracting Officer's Technical Representative must monitor damages closely to document any Government claims concerning liquidated damages, since these may be disputed by the maintenance contractor.

FAR Conditions
for Using a
Liquidated
Damages Clause

FAR 12.202

FAR 12.202 gives guidance for using a liquidated damages clause.

(a) Liquidated damages clauses should be used only when both (1) the time of delivery or performance is such an important factor in the award of the contract that the Government may reasonably expect to suffer damage if the delivery or performance is delinquent, and (2) the extent or amount of such damage would be difficult or impossible to ascertain or prove.

In deciding whether to include a liquidated damage clause in a contract, the contracting officer should consider the probable effect on such matters as pricing, competition, and the costs and difficulties of contract administration.

9.7 Payment Methods for FIP Maintenance Services

Methods of Payment

You should understand methods of payment for maintenance. These methods include:

- Payment per service call
- Flat rate payment

Payment per service call (time and materials) is based on the concept that the service contractor bills the Government agency for labor and parts for each maintenance call. This is very similar to the practice followed by private individuals for their personal computers. This method of payment is advantageous when FIP equipment is new. As breakdowns become more frequent, costs for payment per service call can rise sharply.

Flat rate payment (also called insurance policy maintenance) is based on the concept that the customer pays a certain flat rate for a period of time, such as one month, on a maintenance contract. In return, the maintenance contractor responds to all service calls and presents no additional charges for labor. Flat rate payments are not advantageous to the Government when equipment is low cost and extremely reliable (e.g., a modem). However, later in the system life cycle they can be more cost effective to the Government. Then breakdowns are more frequent, so contractors may demand higher flat rate costs.

Note: Most of the time contractors will require a contract to inspect and bring equipment up to a “maintainable” status before entering into a flat rate agreement if equipment is not new.

SUMMARY

In this chapter, you learned to identify and explain the special characteristics affecting maintenance services, including equipment, software, and telecommunications. In the next chapter you will learn about the unique considerations in obtaining FIP equipment.

CHAPTER 10

ACQUIRING FIP EQUIPMENT

Chapter Vignette

“Well,” said Mark, “I may not know much about all the rest of the FIP acquisition business, but at least I think I know something about FIP equipment. I guess that really means computers, right?”

“Well, it certainly includes computers,” replied Marcia, “but it also includes a great deal more than just computers. You will find that FIP equipment can really include a wide category of equipment. It would be helpful if you really understand the differences in the various types of FIP equipment and use the terms consistently, to mean what is intended.”

Course Learning Objectives

At the end of this chapter, you will be able to:

Overall:

Explain the various types of FIP equipment and the unique considerations in acquiring FIP equipment.

Individual:

10.1 Explain the various types of FIP equipment.

10.2 Explain unique considerations in acquiring FIP equipment.

Chapter Overview

Scope

This chapter will explain the various types of FIP equipment. In addition, it will explain some unique considerations in obtaining FIP equipment, such as

- warranted as new
 - new vs. refurbished components (in accordance with FAR and FIRMR references)
 - new vs. used components
 - new only
 - related supplies
-

Topics in This Chapter

This chapter includes the following topics:

SECTION	TITLE	PAGE
10.1	Types of FIP Equipment	10-4
10.2	Unique Considerations in Obtaining FIP Equipment	10-7

References

In order to fully understand the topics in this chapter, it is recommended that you have the following references on hand:

- FAR 10.010, 10.011, 52.210-5, 52.210-6, 52.210-7
 - FIRMR 201-4
 - FIRMR Bulletins A-1, C-2, C-27, C-29 and C-35
-

10.1 Types of FIP Equipment

Types of FIP Equipment

FIRMR 201-4.001

This section discusses the types of FIP equipment (hardware) that you will commonly encounter in a FIP resource acquisition. The FIRMR defines FIP equipment as “any equipment or interconnected system or sub system of equipment used in the automatic acquisition, storage, manipulation, management, movement, control, display, switching, interchange, transmission, or reception of data or information.” Some equipment acquisitions are part of a larger FIP resource acquisition, to acquire hardware, software, and services and support services at the same time. However, this section discusses primarily the equipment (hardware).

List of Common FIP Equipment

The following list explains the most common types of equipment that you will encounter in a FIP resource acquisition.

Keep in mind that FIP technology is advancing very rapidly and new terms and types of computer applications are being introduced all the time.

For example, the capabilities and differences between laptops and the smaller computers is blurring, as computer makers are able to engineer more and more speed and storage into ever smaller packages. Nevertheless, the following types of FIP equipment (hardware) terms are likely to be present for some years.

Computers, ranging from small to large, include:

Palmtops—very small computers, weighing less than 3 pounds and intended to be used for limited computing jobs away from an office and requiring relatively little storage. Usual cost is less than \$1,000.

Personal Digital Assistants (PDAs)—the newest type of small computer, approximately 3 pounds, including ability to FAX, word process and access data bases remotely. An example is Apple’s Newton.

(Topic continued on next page)

10.1 Types of FIP Equipment

List of Common
FIP Equipment
(continued)

Computers *(continued)*

Sublaptops—lightweight versions of the popular laptop computers, featuring small keyboards, weighing about 3 - 4 pounds. Examples include the Hewlett Packard Omnibook and some versions of the IBM ThinkPad. Sometimes called notebook computers.

Laptops—portable (4-7 pound) computers with most of the capabilities of the desktop computers, except size of screen and storage capacity.

Desktops—the most common of the microcomputers, generally 20 - 60 pounds in weight and available for less than \$2,000 and increasingly capable of greater speed and storage for most office tasks.

Work Stations—similar in size and weight to the desktop computers, but capable of much faster speeds and storage and typically used for specialized tasks such as science, engineering and complex graphics and financial systems.

Servers—very fast specialized computers, of approximately work station or minicomputer size, used to serve a small network, such as a Local Area Network (LAN).

Minicomputers—roughly the size of an office cabinet or desk, and capable of major computing tasks such as manipulating very large data bases, such as payrolls and personnel records.

Mainframes—the largest and original computers, sometimes filling a large room and usually reserved for the most expensive and complex computing tasks, such as science and engineering computations. Includes extremely fast supercomputers and massively parallel computers. Usually built one at a time at a cost of millions of dollars.

(Topic continued on next page)

10.1 Types of FIP Equipment *(continued)*

List of Common FIP Equipment (continued)

Peripherals. Generally, any type of hardware, other than the actual computer, used to complete or augment the computing process. Examples include devices for both inputting and outputting:

Printers—use dot matrix, ink jet or laser printing technology to print black and white or color documents.

Scanners—use optical scanning technology to scan and copy a page or document rapidly into a computer memory, allowing the scanned page or image to be manipulated and transferred to other documents.

Storage Devices—there are multiple types of storage devices. Examples include tape streamers, CD-ROM, disc drives and cartridges.

Telecommunications Equipment. Other types of FIP equipment fall within the category of telecommunications. Examples include Private Branch Exchange (PBX), Customer Premises Equipment (CPE), and switches. (See Chapters 13 and 14 for more information on telecommunications equipment.)

Related Supplies

FIRMR Bulletin A-1

Cabling and Connectors. The computers and peripheral equipment are connected by cabling and connectors. The computer may be connected directly to a dedicated peripheral, such as a printer, or part of a network, such as a LAN, where it shares printers and other peripherals with other computers and work stations. These are considered related supplies in accordance with the FIRMR. However, these items are commonly acquired with hardware.

10.2 Unique Considerations in Obtaining FIP Equipment

Introduction

There are several unique considerations you must make in obtaining FIP equipment. Some major considerations concern whether the equipment must be “new,” “refurbished,” or “used.” You must be aware of these unique considerations in acquiring FIP equipment:

- New vs. used components
- New only
- Equipment warranted as new
- New vs. refurbished components

New or Used?

One of the major questions the requiring agency should ask and should address in the Acquisition Plan is *whether the equipment to be acquired should be only new, only refurbished, only used, or a combination*.

Definitions

FIRMR Bulletin C-29

FIRMR Bulletin C-29 distinguishes among “new,” “used,” and “outdated” computer equipment, and provides guidelines on the considerations by agencies when solicitations allow offerors to propose used equipment.

- “new” equipment means equipment that has never been installed.
- “used” equipment means equipment that has been previously installed. This term includes “reconditioned,” “refurbished” or “remanufactured” equipment.
- “outdated” equipment is equipment that is over eight years old (based on the initial commercial installation date of that model of equipment) and is no longer in production.

Do NOT confuse used FIP equipment with outdated FIP equipment. They have both been previously installed, but note that the *outdated equipment is no longer in production*.

New Only

Unless told otherwise, an offeror may offer a computer or other FIP resource which contains some components that were previously used, but then returned to the factory for remanufacturing or refurbishment. For example, certain computer boards, consisting of various chips, may have been remanufactured and installed in an otherwise new computer for delivery to the Government.

If such components are NOT acceptable, you must explain in the solicitation that only new components are acceptable. This is to prevent use of recycled, remanufactured or refurbished components of all kinds. If new only is required then it must be justified in accordance with the FAR and FIRMR.

(continued on next page)

10.2 Unique Considerations in Obtaining FIP Equipment *(continued)*

FIRMR
Requirement

The FIRMR requires justification for “only new” equipment when using a GSA nonmandatory FIP schedule.

FIRMR 201-39.803

Definitions

There are no universally accepted definitions for terms such as “refurbished,” “reconditioned,” and “remanufactured.”

CAUTION

Because there are no universally accepted definitions for terms such as “refurbished,” “reconditioned,” and “remanufactured,” when using such terms in the solicitation, be sure to define the terms, *using your agency’s definition for those terms*.

When Used FIP
Equipment Might
Be Advantageous

There may be cases when the acquisition of used FIP equipment, (including refurbished, reconditioned or remanufactured equipment) might be more advantageous to the Government. FIRMR Bulletin C-29 provides the following specific examples:

Example 1. The agency’s needs can be satisfied with used equipment which is available at a substantial discount compared to the manufacturer’s current market price for the same make and model of new equipment.

Example 2. The agency has only a short term requirement for equipment.

Example 3. The agency is not positioned to utilize the most current version and release level of the manufacturer’s operating system and will not be so positioned during the system’s life.

Example 4. The agency’s application will remain stable for a long period of time and does not require use of the latest technology for economy or efficiency.

Example 5. The agency needs additional system components to increase the capacity of a currently-installed system.

FIRMR Bulletin C-2
FIRMR Bulletin C-27
FIRMR Bulletin C-29

In any case, if it appears that used FIP equipment might be suitable, check FIRMR Bulletin C-29. For additional information on the disposition and reuse of FIP equipment, you should also check FIRMR Bulletin C-2. Also, FIRMR Bulletin C-27 discusses reuse of outdated FIP equipment.

(continued on next page)

10.2 Unique Considerations in Obtaining FIP Equipment *(continued)*

FAR 10.010

FAR 10.010(a), (b), and (c)

Finally, if acquiring used or reconditioned material of any kind, you should also check FAR 10.010(a), (b), and (c). This FAR reference requires you to consider four factors when acquiring used or reconditioned materials:

1. Safety of persons or property;
2. Total cost to the Government (including maintenance, inspection, testing, and useful life). You will recall that this is another way of stating that you should consider the total life cycle costs of an acquisition. See Chapter 5, “The System Life Cycle.”;
3. Performance requirements; and
4. Availability and cost of new materials and components.

Of course, you might need help from the agency’s technical experts for these considerations.

New vs. Used Tradeoffs

The advantage of acquiring all new equipment is that it can normally be expected to last longer. The disadvantage is that it may sometimes cost more than acquiring used or refurbished equipment. It is therefore important for the requiring agency to consider the tradeoffs of cost versus longer expected system life cycle in a cost/benefit analysis and incorporate the agency’s conclusion in the Acquisition Plan.

For example, an agency requiring an older mainframe computer as a short term replacement (2-4 years) for an identical computer may conclude that it is not essential to acquire a new computer. It may be more cost effective to acquire an older, used computer at a reduced price. Of course, if you are acquiring used FIP equipment, you should rely on the cost/benefit analysis.

CAUTION
<i>If it is not clear whether used or refurbished components are acceptable, you should ask the requiring agency.</i>

10.2 Unique Considerations in Obtaining FIP Equipment (continued)

FIP Equipment
Warranted As
New

When FIP equipment is acquired it is *warranted as new only at time of the original sale*.

You should be aware that the contractor will normally charge a higher price for all equipment warranted as new.

New versus
Refurbished
Components

Even when FIP resources, such as a computer, are acquired as new, it is necessary to continually maintain them and to replace parts as they break or wear out. For example, certain chips or boards may fail and require replacement. When this occurs, the replacement chip or board may not necessarily be “new,” but rather a “refurbished” component. A refurbished component is one that is warranted to be refurbished or rebuilt to the same standards as a new equivalent. However, if this is not acceptable, you must alert the offeror in the solicitation (contract) to provide “new only.”

New versus Used
Components

Unless the contractor specifies that a used component has been refurbished (returned to a standard like new), you cannot assume that it is refurbished. Generally, components specified as “used” will be cheaper than new components or refurbished components.

(continued on next page)

10.2 Unique Considerations in Obtaining FIP Equipment (continued)

New or Used Material Clause

FAR 10.011

Once you have determined whether the FIP equipment must be new, used, or a combination of the two, you should follow the guidance in FAR 10.011 and *insert the appropriate clauses in the solicitation to alert the offerors.*

FAR 52.210-5

If only new FIP equipment or material shall be acceptable, insert the clause at FAR 52.210-5, New Material.

FAR 52.210-6

If used FIP equipment or material shall be acceptable, insert the clause at FAR 52.210-6, Listing of Used or Reconditioned Material, Residual Inventory, and Former Government Surplus Property.

Specify if “new only” components are mandatory.

Compliance with Executive Order 12845

FIRMR Bulletin
C-35

Another unique consideration is energy efficiency. When you acquire new equipment, be sure that you comply with Executive Order 12845. This Executive Order requires that each Federal agency ensures that all acquisitions of desktop microcomputers, including peripherals such as printers and monitors, *must meet the standards for energy efficiency established in the Environmental Protection Agency “Energy Star” requirements, as of October 21, 1993.* FIRMR Bulletin C-35 provides guidance on acquiring energy efficient microcomputers and associated computer equipment.

This is a mandate to acquire **ONLY** those desktop computers (and peripherals) which meet the specified standard. Most manufacturers are already complying with the energy standards. For example, when not in use, some computers now draw only a small amount of electrical power.

You shall specify the energy standards in your pertinent solicitations, unless you have a waiver. This information is obtained from your technical personnel. Waiver authority varies by agency. Be sure to check with your Information Specialists.

(continued on next page)

10.2 Unique Considerations in Obtaining FIP Equipment (continued)

Decision Table

This decision table summarizes the unique considerations discussed in this chapter and the actions you should consider in acquiring FIP equipment.

FAR 52.210-5 FAR 52.210-6	If...	Then...
FIRMR Bulletin C-35	Systems Life Cycle or other considerations require that the equipment must be new... new only...	require that all offerors supply only new equipment. (FAR 52.210-5) insert a new material clause in the solicitation and contract.
	refurbished components are acceptable...	specify in the solicitation that refurbished components are acceptable, but define “refurbished,” “reconditioned,” or “remanufactured.”
	used components are acceptable...	specify in the solicitation that used components are acceptable and insert a used component clause. (FAR 52.210-6)
	acquiring desktop microcomputers...	ensure energy-efficiency. (FIRMR Bulletin C-35)

SUMMARY

In this chapter, you learned about the various types of FIP equipment and the unique considerations in the acquisition of FIP equipment. In the next chapter, you will learn to compare and contrast the regulatory standards, procedures, and process for Government acquisition of various types of intellectual property and data rights.

CHAPTER 11

INTELLECTUAL PROPERTY AND LICENSING AGREEMENTS

Chapter Vignette

Marcia continued to brief Mark on FIP resources acquisition. “You will find that one of the trickier aspects of FIP resource acquisition is the area of ‘intellectual property,’ she said. “Each time the Government purchases FIP resources, especially software, we have to consider the questions of intellectual property and data rights. We must be concerned with state laws, restrictive clauses, and licensing agreements. You will find that, many times, the contractor would prefer to lease or license software to the Government, or to any user, rather than sell it outright. Fortunately, the FARs and DFARS provide considerable guidance on these matters to obtain the best possible, and usually the least restrictive, agreement for the Government.”

Course Learning Objectives

At the end of this chapter, you will be able to:

Overall:

Compare and contrast the regulatory standards, procedures and process for Government acquisition of various types of intellectual property and licensing agreements.

Individual:

- 11.1 Apply the statutes concerning intellectual property.
- 11.2 Compare and contrast the categories of intellectual property.
- 11.3 Differentiate between the types of licensing agreements.

Chapter Overview

Scope

This chapter will compare and contrast the categories of intellectual property; differentiate between the types of data rights described in the FAR and DFARS; explain and contrast the differences with regard to intellectual property and data rights, as described in the FAR and DFARS; define and identify types of licensing agreements; and identify unique licensing acquisition considerations, including:

- General - (federal and state laws, entire agreement clauses, non-disclosure clauses, warranties, other restrictive clauses, and general contract clauses);
- Small purchases;
- GSA Schedule - nonmandatory;
- Requirement/agency contracts; and
- Specific contracts.

Topics in This Chapter

This chapter includes the following topics:

SECTION	TITLE	PAGE
11.1	Statutes Concerning Intellectual Property	11-5
11.2	Categories of Intellectual Property	11-9
11.3	Types of Licensing Agreements	11-19

(continued on next page)

Chapter Overview *(continued)*

References

In order to better understand the topics discussed in this chapter, it is recommended that you have the following references at hand:

- FAR 27.3 Patents Rights Under Government Contracts
 - FAR 27.4 Rights in Data and Copyrights
 - FAR 52.227-14 or 15 Clauses
 - FAR 52.227-16 Additional Data Requirements
 - FAR 52.227-17 Special Works
 - FAR 52.227-18 Existing Works
 - FAR 52.227-19 Commercial Computer Software (restricted rights)
 - FAR 52.227-20 Contracts Awarded under SBIR programs
 - DFARS 227.3
 - DFARS 227.4
 - DFARS 227.401
 - DFARS 227.402
 - DFARS 227.403 (70) - (77)
 - DFARS 227.405
 - DoD Directive 5010.12, *DoD Data Management Program*
 - GSA's *A Guide for Acquiring Commercial Software*
 - GSA's *A Guide for Acquiring Software Development Services*
-

11.1 Intellectual Property Laws

Introduction	<p>There are five basic statutes that apply to intellectual properties. These are:</p> <ul style="list-style-type: none"> • Patent Law • Copyright Law • Software Copyright Protection Act • Trade Secrets Act • Trademark Laws
Patent Law	<p>Article 1 Section 8 of the Constitution provides certain rights to authors and inventors with regard to this right by enacting the Federal Patent Act. Patent law can be found in 35 U.S. Code.</p>
Copyright Law	<p>Basic Copyright Law is found in 17 U.S. Code. The Copyright Act of 1980 amended Copyright Laws to allow copying of copyrighted software for backup or archival purposes. It is important that contract personnel understand the basic laws in order to protect the rights of the vendor and the Government.</p> <p>Software Copyright Protection Act. The Software Copyright Protection Act was enacted on 28 October 1992 (P.L. 102-561). This act amends Title 18 of the US Code to include major penalties for “significant software copyright infringement” including the following Penalties shown in Section 1 of the Act:</p> <p>“...imprisoned not more than 5 years.” Or fined \$2,500 or both for violations by reproducing or distributing 10 copies or phonorecords of 1 or more copyrighted works with a retail value of over \$2,500 or; imprisoned nor more than 10 years or fined as above or both if a second or subsequent offense or; imprisoned not more than 1 year or fined \$2,500 in any other case.”</p>
Trade Secrets Act	<p>Title 18 of the U.S. Code discusses penalties for improper disclosure of Trade Secrets.</p>

(continued on next page)

11.1 Intellectual Property Laws *(continued)*

Trademark Laws

A trademark may be a word, symbol, design or a combination of words and design, a slogan or a distinctive sound which identifies and distinguishes the goods or services of one party from those of another. Used to identify a service, it can be called a service mark. In general, the term trademark refers to both trademarks and service marks. Normally, a trademark for goods appears on the product or on its packaging, while a service mark is usually used in advertising to identify the owner's service.

A trademark is different from a copyright or a patent. A copyright gives protection for an artistic or literary work and a patent gives protection for an invention.

Unlike a copyright or patent, trademark rights can last indefinitely if the mark continues to perform a source-indicating function. The term of the Federal trademark registration is 10 years, with 10-year renewal terms. However, between the fifth and sixth year after the date of the registration, the registrant must file an affidavit stating the mark is currently in use in commerce. If no affidavit is filed, the registration will be canceled.

Trademark rights arise from either (1) use of the mark, or (2) a bona fide intention to use a mark, along with the filing on an application to Federally register that mark on the Principal Register. A Federal trademark registration is not required in order for a trademark to be protected, and a trademark may be used without obtaining a registration.

Before a trademark owner may file an application for a Federal registration, the owner must either (1) use the mark on goods which are shipped or sold, or services which are rendered, in commerce regulated by Congress (e.g., interstate commerce or commerce between the U.S. and a foreign country), or (2) have a bona fide intention to use the mark in such commerce in relation to specific goods or services.

The Federal registration of trademarks is governed by the Trademark Act of 1946, 15 U.S.C. Sec. 1051 et.; the Rules 37 C.F.R. Part 2; and the Trademark Manual of Examining Procedure.

Trademarks are filed with the Patent and Trademark Office of the U.S. Department of Commerce, Washington, D.C.

(Topic continued on next page)

11.1 Intellectual Property Laws *(continued)*

Trademark Laws (continued)

Even though registration of a trademark is NOT required for protection of that trademark, registration does make it easier to file for trademark infringement and collect damages. The following is a list of trademark registration benefits:

1. The filing date of the application is the date of first use of the mark in commerce. This first use gives the registrant nationwide priority as of that date, except as to certain prior users or prior applications;
2. The right to sue in Federal court for trademark infringement;
3. Recovery of profits, damages, and the possibility of treble damages and attorney's fees;
4. Constructive notice of a claim of ownership which eliminates a good faith defense for a party adopting the subsequent to the registrant's date of registration;
5. The right to deposit the registration with U.S. Customs in order to stop the importation of goods bearing an infringing mark;
6. Prima facie evidence of the validity of the registration, registrant's ownership of the mark and of registration's exclusive right to use the mark in commerce in connection with the goods or services specified in the certificate of registration issued by the Patent and Trademark Office;
7. The possibility of incontestability, in which case the registration constitutes conclusive evidence of the registrant's exclusive right, with certain limited exceptions, to use the registered mark in commerce;
8. Availability of criminal penalties treble damages in an action for counterfeiting a registered trademark;
9. A basis for filing trademark applications in foreign countries.

Trademark case law is evolving probably as fast as software. A trademark is **ANY** identifying "mark," which relates a product or service to a manufacture, supplier service provider, or any other company or person.

Recent case law states that using the same "color" or color combination of a container is considered as trademark infringement.

(Topic continued on next page)

11.1 Intellectual Property Laws *(continued)*

Trademark Laws (continued)

Government Developed Software

If a unique name is to be attached to software developed by a contractor for the Government, then provide for who own the name—the Government or the contractor. A clause which was drawn by the Intellectual Property Attorneys at Department of the Army, follows:

The name or identification of the {description of product or service} resulting from this contract will be the mark “_____.” This mark is the trademark {service mark, certification mark, or collective mark} and property of the U.S. Government {can also be agency name}, and is not subject to registration by the contractor. The Contractor may use the mark, only, in credit lines or references. The Contractor has no authority to permit or authorize other firms or persons to use this mark. The Contractor admits the validity of, and agrees not to challenge the mark, and that any and all rights that may be acquired by the use of the mark by the Contractor shall insure to the sole benefit of the U.S. Government {can also be agency name}. In the event that the contractor learns of any sue by a third party of a mark which infringes, passes-off, dilutes, deceives, or is likely to confuse the public in relation to the mark “_____”, Contractor shall immediately notify {name of agency}. The obligations and restrictions as to the mark “_____” shall continue even after the termination of this agreement.

Note: This area is so complex that you should consult with your legal advisor. In addition, caution your using activity to refer all licensing agreements to the contracting officer.

(continued on next page)

11.2 Categories of Intellectual Property

Intellectual Property

Whenever the Government acquires a FIP resource, such as a computer or software, it is assuming a degree of control over the “intellectual property” of the inventor, author or developer of that item. Intellectual property can be any *intangible* property, such as an idea, for which a developer claims credit and rights of development, and includes designs, technical data and written documentation which did not previously exist before the owner developed it.

Protection for Intellectual Property

Intellectual property may be recognized and protected by national laws and international agreements, including patent rights, copyrights, and trademarks. The contractor and the contracting officer must agree that the item being acquired is indeed intellectual property. The developer of intellectual property may also allow others to use it, in return for a fee, such as a royalty payment, or a licensing fee.

For example, the design of the computer or data, such as technical information about the computer’s operating system, is intellectual property of the person or company that developed the computer or the technical data. In fact, the technical data is usually a greater concern than hardware, because it can be transported and copied much more quickly and easily by competitors.

Intellectual property may exist before a Government contract is signed, or it may be developed during the performance of a contract, with the development costs paid either by the contractor, by the Government, or by both.

In any case, the contractor or offeror will seek to maintain certain rights which allow the Government to use the FIP resource while protecting the owner’s rights to gain the fullest benefit of the intellectual property, particularly *data* concerning hardware, software, or operating procedures.

11.2 Categories of Intellectual Property

Types of
Intellectual
Property

The four basic types of intellectual property with which you might be concerned in a FIP resource acquisition are shown in the following table.

TYPES OF INTELLECTUAL PROPERTY
<p>Patent - a new or novel thing or new process that has been reduced to practice. The owner of a patent is the first person who filed a patent with the patent office. the patent owner then receives a 17 year monopoly on the use of the patent. For example, computer hardware design may be patented.</p>
<p>Trademark - a device, such as a word or illustration, pointing distinctly to the origin or ownership of merchandise to which it is applied and legally reserved to the exclusive use of the maker, owner or seller. Examples include "IBM," "Apple" and "Microsoft." Trademarks are also registered and cannot be copied.</p>
<p>Copyright - an original arrangement of information which the author can protect by a copyright notice on the material at time of publication. An example of a copyright notice is "<i>Copyright by John Smith Publishing, 1999. All rights reserved.</i>" Copyrights are observed for the life of the author plus fifty years. An example is a computer operating system.</p>
<p>Trade Secret - any type of business information which is commercially valuable, whether or not it has been patented, copyrighted, trademarked or otherwise protected, over which the contractor claims ownership and does not wish to have revealed. Examples include customer lists and production processes, such as paint formulas.</p>

What is "Data?"

FAR 27.401

You can see that these types of intellectual property all concern some kind of *data*. Often, a FIP resource acquisition is useless without access to certain data. "**Data**" means *recorded information regardless of the form or the media on which it may be recorded*. This includes technical data and computer software. It does NOT include information incidental to contract administration, such as financial, administrative, cost or pricing or management information (FAR 27.401). The point is that in a FIP resources acquisition, you must also acquire the rights to use data, such as technical data.

(continued on next page)

11.2 Categories of Intellectual Property *(continued)*

Contractor's and
Offeror's
Concerns About
Data

A major concern for the contractor or offeror is that the Government does not disclose to rivals or to the general public any information, such as technical data, which the contractor has developed at its own cost, whether or not that information is already protected by patents, trademarks, copyrights or agency regulations.

Development at
Private Expense

FAR 31.205-18

Contractors and offerors are especially concerned about protecting and not sharing data which they developed *exclusively at private expense*. In such cases, none of the development costs was paid for by the Government and the development was not required for performance on a Government contract or subcontract, so the offeror sees no reason to give away data rights (FAR 31.205-18).

"Development
Exclusively With
Government
Funds"

However, in some cases, an item, component, or process is developed as part of a contractor's or subcontractor's work on a Government project and is considered to be "*developed exclusively with Government funds*." In such cases, the contractor or offeror has no claim on data rights, and the Government can claim "*unlimited data rights*." If the contractor wishes to market the item, it must petition the Government for the permission to do so.

For example, if a subcontractor was required to develop software as part of an ongoing contract and the development was fully paid for by the Government, the subcontractor cannot then claim a patent, copyright or other rights.

DFARS 252-
227.7013

Using DFARS 252-227.7013 does NOT give the U.S. Government copyright in software which is created and developed completely with government funds. The contracting officer needs to keep this in mind when negotiating price. The government should be getting a price break, as the contractor can commercially exploit the software. If it is important for the government agency to have complete control over the software, then the contracting officer should use the "special works" clause which transfers copyright ownership to the government.

FAR 27.305-5(b)

However, the Government understands the concern of contractors and has agreed (FAR 27.305-5(b)) to "withhold from disclosure to the public for a reasonable time other information disclosing a reported invention included in any data delivered pursuant to contract requirements, provided the contractor notifies the agency."

(continued on next page)

11.2 Categories of Intellectual Property *(continued)*

Government Concerns

Sometimes, the Government does not wish to enter into an agreement which places too many restrictions on its use of data or equipment from a contractor because it may wish to:

- allow use of the equipment or information by others, such as third party FIP service support contractors;
 - have an offeror's proposal reviewed by nongovernment evaluators;
 - allow use by other contractors on Government business;
 - perform emergency repairs or overhaul work; or
 - release information to foreign governments, when in the best interests of the United States.
-

Contract Specialist's Role

As a contract specialist, you may become involved in protecting the Government's rights to data during FIP resources acquisition. You are not expected to be an expert in this area, because that can require legal training. However, you must understand some basic information about data rights and licensing.

You should be particularly concerned about data rights and licensing in FIP resources acquisition when software is acquired, but licensing, warranties and other aspects of data rights may also affect hardware and FIP equipment acquisitions.

Usually, you will be most concerned about intellectual property and data rights early in the solicitation and award phase, when you determine whether one or more offerors may hold certain data rights which the Government requires. However, you may also become concerned with intellectual property and data rights later, during discussions in source selection, when you are trying to obtain access to data rights for the Government.

(continued on next page)

11.2 Categories of Intellectual Property *(continued)*

Parties Concerned with Data Rights

Essentially, there are three parties who are concerned with data rights:

- the contractor, which is concerned with protecting its data rights, and normally wishes to place maximum restrictions on the use or release of the data to other parties, so as not to lose trade secrets;
- the Government, which is acquiring a FIP resources and wishes unlimited *rights* on the use of data, including release to third parties; and
- third parties, such as other contractors or subcontractors, who may require to the use of data for work on other Government contracts, but prefer not to pay royalties or other fees to the original owner of the data.

You can see there may be a conflict because it is in the interest of the original contractor or owner to place maximum restrictions on data rights by the Government, while it is in the Government's best interest to obtain unlimited rights, so it can use the data wherever it wishes.

Balancing Interests On Data Rights

In order to obtain this maximum flexibility, the Government usually tries to obtain data rights which give it the least restrictions over use, without being unfair to the contractor or offeror. This requires balancing the interests of the Government and the offeror. Of course, in any given acquisition, the Government should not attempt to obtain more data rights than necessary for the technical requirements of that acquisition.

DoD Directive 5010.12

For example, DoD Directive 5010.12, *Data Management Program*, provides policy guidance to DoD agencies concerning acquisition of technical data rights by DoD agencies. Other agencies have similar guidance, and you should check your agency's guidance on data rights before preparing the RFP.

Three Types of Data Rights

There are three basic types of data rights which you should understand:

1. Unlimited Rights;
2. Government Purpose License Rights (GPLR) and
3. Limited Rights.

(continued on next page)

11.2 Categories of Intellectual Property *(continued)*

Unlimited Rights

FAR 27.401

Often, in a FIP resources acquisition, the Government will assert unlimited rights to the technical data. *Unlimited rights means rights to use, duplicate, release, or disclose, technical data or computer software in whole or in part, in any manner and for any purpose whatsoever, and to have or permit others to do so* (FAR 27.401).

FAR 27.302

For example, the Government receives unlimited rights in cases where development has been paid for exclusively by Government funds. You can see that unlimited rights give the Government the greatest flexibility and advantages and give the least advantage to the contractor or offeror. However, even in cases where most or all of the funding was provided by the Government, it may allow the contractor to market (“commercialize”) an invention, so long as the Government can continue to use it without paying royalties (FAR 27.302).

In some cases, especially where the contractor or offeror has expended its own funds for development, it may not be willing to allow the Government unlimited rights, but may agree to *GPLR*, which are not quite as broad.

(continued on next page)

11.2 Categories of Intellectual Property *(continued)*

Government Purpose License Rights (GPLR)

DFARS 227.401

Government Purpose License Rights (GPLR) means the rights to use, duplicate or disclose data in whole or in part and in any manner, *for Government purposes only*, and to have or permit others to do so for Government purposes only. Government purposes include competitive procurement, but do not include the right to have or permit others to use technical data for commercial purposes (DFARS 227.401).

You can see that GPLR do not give the Government as much flexibility and control over data as “unlimited rights.” However, it is still often in the Government ‘s interest to accept GPLR for technical data, because it encourages the use of new technology developed under Government contracts, but for which the Government did not pay all the development costs.

GPLR still allows the Government the rights to use, duplicate and disclose data for Government purposes only, and to allow others to do so on Government business, without paying royalties, for a stated period of time (usually several years). After the stated period of time has expired, the Government is then usually entitled to unlimited rights.

“Limited Rights”

FAR 27.401

In many cases, an offeror or contractor may not wish to give the Government either “unlimited rights,” or GPLR, but may settle for allowing the Government to assume certain *limited rights* concerning the technical data (FAR 27.401).

“Limited rights means rights to use, duplicate, or disclose technical data, in whole or in part, by or for the Government, with the express limitation that such technical data shall NOT, without the written permission of the party asserting limited rights, be:

- released or disclosed outside the Government;
- used by the Government for manufacture, or in the case of computer software documentation, for preparing the same or similar computer software;

(Topic continued on next page)

11.2 Categories of Intellectual Property *(continued)*

“Limited Rights” (continued)

- used by a party other than the Government, except that the Government may release or disclose technical data to persons outside the Government, or permit the use of technical data by such persons if such release or disclosure is necessary for emergency repair and overhaul; or is a release or disclosure of technical data (other than detailed manufacturing or process data) or use of such data by a foreign government that is in the interest of the Government and is required for evaluation or informational purposes.”

You can see that limited rights still gives the Government much of the flexibility it requires to use the data as necessary in its own interests, such as maintenance by other parties.

However, when using limited rights, during the contract administration phase, you must also ensure that:

- the original owner (contractor or subcontractor) permits the release of the data.
- the persons to whom the data is released may NOT further release or disclose or use such data beyond the terms and conditions of the contract; and

“Restricted Rights”

Do not confuse “limited rights” with “*restricted rights*.” *Restricted rights apply only to commercial computer software and include as a minimum:*

- the right to use computer software with the computer for which it was acquired, including use at any Government installation to which the computer may be transferred by the Government;
- use computer software with a backup computer if the computer for which or with which it was acquired is inoperative;
- copy computer programs for safekeeping (archives) or backup purposes; and
- modify computer software, or combine it with other software, subject to the provision that those portions of the software incorporating restricted rights software are subject to those same restricted rights.

FAR 27.401 DFARS 252.227- 7013(c)(1)(ii)
--

Restricted rights for commercial software are set forth in a **Restricted Rights Notice** (FAR 27.401). For restricted rights on DoD commercial software acquisitions, check DFARS 252.227-7013(c)(1)(ii).

(continued on next page)

11.2 Categories of Intellectual Property *(continued)*

Data Rights Clauses

FAR 27.303 and 52.227-14

FAR 27 provides guidance on data rights clauses and requires that **all contracts which require acquisition of data must contain a data rights clause explaining the rights of each party.** You should also check FAR 27.303 and 52.227-14 for information on data rights clauses. *However, in some FIP resource acquisitions, you may then need help of legal counsel to modify or “tailor” the data rights clause.*

For example, if the Government requires minimum rights to certain technical data for a major system contained in a proposal, you might select and tailor a clause such as the following, from FAR 52.227-23.

SAMPLE DATA RIGHTS CLAUSE

<p><i>“Except for data contained on pages _____, it is agreed that as a condition of award of this contract, and notwithstanding the conditions of any notice appearing thereon, the Government shall have unlimited rights (as defined in the “Rights in Data-General” clause contained in this contract) in and to the data contained in the proposal dated _____, upon which this contract is based.”</i></p>
--

Basically, you should select, and tailor as necessary, one of the appropriate clauses in order to provide the desired level of data rights to the Government.

DFARS Requirements

The DFARS generally parallel the FAR and FIRMR requirements, but include some specific guidance on clauses concerning DoD agency acquisitions of commercial items, including FIP resources developed without Government funding.

Civilian Agency vs. DoD Coverage

FAR Part 27

Civilian data and software requirements are provided in FAR Part 27. DoD requirements are shown in the DoD FAR Supplement. For example, the Unlimited Rights in Software provisions of the FAR allow the Government to disclose restricted computer software to support service contractors or their subcontractors. It also provides for the rights to copy with a replacement computer. The DoD provisions DO NOT provide the Government these rights.

(continued on next page)

11.2 Categories of Intellectual Property *(continued)*

Establishing Minimum Needs for Data Rights

DFARS 227.402-71

For example, DFARS 227.402-71 explains that you should establish the minimum Government needs, use the least intrusive procedures, and obtain only the minimum essential technical data.

You should consider whether third parties, such as other contractors, will require access to the data, for the convenience of the Government.

For example, if the agency intends in the future to “contract out” maintenance of FIP hardware or software, then you should obtain relatively unlimited data rights. Otherwise, you may not be able to provide to a future contractor the technical data required to perform proper maintenance.

On the other hand, if you are obtaining a FIP resource (hardware or software) from a sole source, that source will probably be the only qualified source for maintenance, and unlimited data rights are not so essential.

Payment for Data Rights

Of course, you should expect that the greater the degree of data rights you require, the more money the offeror will require. Generally, you can expect to pay more for unlimited rights than for limited rights. However, the exact cost of data rights will depend on the licensing agreement and results of negotiations.

Once you have determined what the minimum data rights are, then you are ready to obtain access to those data rights through an appropriate licensing agreement.

11.3 Types of Licensing Agreements

How the Government Acquires Data Rights

Now that you understand the requirements for data rights, you should know how the Government obtains data rights. The Government normally attempts to acquire data rights as a regular part of each FIP resource acquisition through licensing agreements, in order to:

1. Protect the Government against any future claims that it used intellectual property without compensation; and
 2. Provide the Government with the greatest degree of flexibility in using the resource as it sees fit, with minimum future restrictions by the offeror or contractor.
-

Explanation of Government's Intent in the Solicitation

In order to ensure that all offerors understand the intent to obtain data rights, this intent is clearly stated in a data rights clause in the solicitation, but sometimes you may modify data rights requirements during discussions prior to contract award.

Unique Licensing Considerations

As a contracts specialist, you should be aware of the unique considerations that will apply to licensing of data rights as part of a FIP resource acquisition. Depending on the specific FIP resource acquisition, these unique considerations can include:

- General considerations
 - Small Purchase considerations
 - GSA Nonmandatory FIP Schedule considerations
 - Requirements and Agency Contracts considerations
 - Specific Contracts considerations
-

(continued on next page)

11.3 Types of Licensing Agreements *(continued)*

General Licensing Considerations

In any FIP resource acquisition, you will be concerned with certain general licensing considerations which will include:

- *Federal and state laws* - the license agreement should not violate the laws of the various states where the equipment or data will be used. However, federal Government preemption applies if there is a conflict with state law in a licensing agreement.
- *entire agreement clause* - an “entire agreement clause” is one which states that the contract now constitutes the entire agreement between all parties and that it supersedes all previous discussions, representations and agreements. You should be careful before agreeing to an entire agreement clause that you indeed agree to superseding all such previous agreements. For example, you might not want to agree to an entire agreement clause if it provided fewer data rights to the Government than an earlier agreement.
- *nondisclosure clauses* - In some contracts, the offeror or contractor will ask for a nondisclosure clause, as part of a licensing agreement for either limited or GPLR data rights. Usually, a nondisclosure clause may require that all employees who are authorized access to the data must sign a “nondisclosure statement.”
- *warranties* - A warranty is a written guarantee of the integrity of a product or the technical data concerning the product, and of the manufacturer’s responsibility for the repair or replacement of defective parts or other repairs. A contractor may require that only its personnel have access to its equipment for operation, maintenance and servicing, or else the warranty will be void. If you enter into a warranty agreement as part of a FIP resource acquisition, if possible avoid warranties that limit the Government’s right to have third party personnel perform operation, servicing and maintenance tasks. Check FAR 46.703 and DFARS 252.246-7001 for guidance on including clauses concerning warranties.
- *other restrictive clauses* - In addition to the limitations and restrictions described in the clauses above, there may be other restrictive clauses which the contractor or offeror wishes to include in the contract language. For example, the offeror or contractor may wish to impose some additional restrictions on other contractors who are given access to data by the Government.
- *general contract clauses* - Finally, in addition to those special clauses which are intended to be restrictive or impose limits, you should also be aware of the general contract clauses. These clauses are mandatory for inclusion in the contract and explain the basic rights of each party and may impose further limitations or restrictions on the Government.

FAR 46.703
DFARS 252.246-7001

(continued on next page)

11.3 Types of Licensing Agreements *(continued)*

Small Purchase Licensing Considerations

In those cases where the FIP resources acquisition will fall under the small purchase rules, you may be concerned with pre-award and post-award licensing considerations. Small purchases are NOT exempt from the regulations governing data and software rights and licensing.

FAR Part 13

If you acquire FIP resources through small purchase procedures (FAR Part 13) you must still follow the guidance for acquiring data rights. For example, you must require that even small business contractors obtain permission or licenses from copyright owners before including privately-owned copyrighted works in data to be delivered under Government contracts.

GSA Nonmandatory Schedule Licensing Considerations

In those cases where the acquisition may be accomplished through use of the GSA nonmandatory FIP schedules, you may have both pre-award and post-award considerations. Since the GSA Nonmandatory FIP Schedules are based on existing contracts, all users of these schedules are bound by the contract agreements in place.

If your agency acquires software through the Nonmandatory Schedules, it must observe the software vendor's existing licensing under the GSA contract. For example, you could not acquire such software and then give to another contractor the permission to make unlimited copies of the software for its own use.

Agency and Contract Requirements for Licensing Considerations

In some cases, you will find that the specific requirement and/or the agency contract already in place may impose certain licensing considerations that you must observe. If there is already an agency contract in place, you must ensure that any FIP resources acquired under that contract and used by any other contractors meet the original licensing requirements.

Normally you will state clearly in the RFP that there is a requirement that an acquisition of commercial software requires the offeror to obtain licensing of the software as a condition of award.

(continued on next page)

11.3 Types of Licensing Agreements *(continued)*

Agency and
Contract
Requirements for
Licensing
Considerations
(continued)

DFARS 211.7004- 1(h)(2)(iii)

For example, for DoD agencies, DFARS 211.7004-1(h)(2)(iii) requires that “A tailored license shall clearly set forth the conditions under which the Government may use the commercial computer software and any related commercial computer software documentation. Solicitations containing a tailored license must require an offeror who is not the commercial computer software or documentation licensor to obtain, and submit with its offer, the licensor’s written agreement to the tailored license as a condition for award. You should include tailored license agreements in Section H, ‘Special Contract Requirements,’ of the contract.”

Types of
Licensing
Agreements

You will find that there are several types of licensing agreements which may apply in a FIP resource acquisition. Licensing agreements can cover long term periods, short terms, be joint or consist of “sole proprietorship.” In addition, the Government may acquire a license for only one computer platform, one site, one agency or for unlimited Government-wide use. The type of license that you must consider in a FIP resource acquisition will depend on the agency’s requirements.

How Many Sites?

One question you must answer in a licensing arrangement is the number of sites that will require the license. This is often of concern in software licensing. Typically, software licenses can be obtained for a single site, multiple sites, or on an unlimited basis.

1. *Single Site License* - useful if the software or other FIP resources will only be required at a single location, such as one research lab.
2. *Multiple Site License* - useful if the agency requires the software or other resource to be used at several sites, possibly exchanging information.
3. *Unlimited License* - useful if the agency requires very widespread use of the software or other resource and may wish to expand use in the future. In cases, the unlimited license may apply to Government-wide use by all agencies and allow release to other parties with no limitations. Normally, the Government prefers the broadest possible licensing arrangements for maximum flexibility, while observing the valid concerns of the owner or offeror.

Clearly, if you intend to transfer data to third parties in the future for the convenience of the Government, you will want a licensing agreement that provides for this flexibility, without excessive payment of royalties.

(continued on next page)

11.3 Types of Licensing Agreements *(continued)*

Other Types of Licensing Agreements

Other types of licensing agreements include:

- Perpetual—one-time payment and use forever
 - Term—limited use for month or year, etc.
 - Exclusive—only one licensee is authorized to use
 - Nonexclusive—multiple users
 - Enterprise—see Chapter 12, “Acquiring Commercial Software”
-

Who Will Require Access to Data?

A second question that you should ask concerns who will require access to the technical data in a FIP resource acquisition. In most cases, you should determine if third parties, such as future maintenance contractors or others, may require access to the data. If so, you acquire a licensing agreement for unlimited data rights.

What Will it Cost?

Another consideration that you must make concerns cost to the Government. In general, you can expect an offeror or contractor may ask a higher price in royalties if the Government requests unlimited data rights in the licensing agreement, because that can mean the loss of future sales to the Government and loss of future commercial sales.

For these reasons, you should select a licensing agreement that reflects the most advantageous position for the Government. Ideally, this would include the fewest restrictions, such as unlimited access to data. However, if the cost in royalties or other payments is too high, you may have to make a tradeoff and settle for some restrictions in the licensing agreement, such as a limited data access.

(continued on next page)

11.3 Types of Licensing Agreements *(continued)*

Summary Table

This table summarizes the objectives of this chapter and your actions in obtaining data rights.

SUMMARY TABLE	
If...	Then...
A FIP resource acquisition is planned...	You must state that offerors must obtain necessary licenses from the owners.
A FIP resource contract will require the production of data....	You must tailor and include appropriate data rights clauses in the contract.
The Government will require access to technical data...	You should determine the minimum requirements for data right and determine whether you require: <ul style="list-style-type: none"> • Unlimited data rights • GPLR, or • Limited data rights
A contractor develops data, such as software during a contract paid exclusively by Government funds....	The contractor can request permission to market, or “commercialize” the discovery but the Government retains full use without paying royalties.
You acquire FIP resources through small purchase...	The bidders are still bound by existing data rights and intellectual property laws.
You acquire FIP resources, or allow a contractor to acquire FIP resources through a GSA Schedule...	You are bound by the data and software rights in the GSA contract.
An agency acquires FIP resources under an existing agency contract...	The acquiring agency is bound by the data rights and licensing agreements in the original contract.
An agency requires widespread use of a FIP resource, such as software...	Consider an unlimited license.

SUMMARY

In this chapter, you learned to compare and contrast regulatory standards, procedures, and processes for Government acquisition of various types of intellectual property and data rights. In the next chapter, you will distinguish among and choose the appropriate method of acquisition available for acquiring commercial software.

CHAPTER 12

ACQUIRING SOFTWARE

Chapter Vignette

You know,” said Mark, “throughout our discussion of FIP resource acquisitions, you keep hinting that software is some sort of special area, something I have to be really careful about. Is that so?”

“Well,” said Marcia, “I have also tried to alert you to the unique or special considerations about each type of FIP resource, but you’re right. Software, especially commercial software, is really a special case, with its own unique considerations. You know, it is policy to pursue a software solution, if possible, rather than buying new hardware. But, software usually has a much shorter life cycle before it is modified or made obsolete. Authors have to make their money on new software very quickly or risk losing out to rivals, and you will find that market surveys for software usually reveal there is less free and open competition than for hardware or services.”

Course Learning Objectives

At the end of this chapter, you will be able to:

Overall:

Distinguish among and choose the appropriate method of acquisition available for acquiring commercial software.

Individual:

- 12.1 Explain what is not commercial software.
- 12.2 Explain key terms as they relate to commercial software acquisition.
- 12.3 Describe categories and types of commercial software.
- 12.4 Explain pricing structures and the effect on licenses for commercial software.
- 12.5 Contrast the differences in the commercial software life cycle and the software life cycle.
- 12.6 Distinguish among and explain the various methods of acquisitions available for commercial software.
- 12.7 Discuss the current major issues involving commercial software.

Chapter Overview

Scope

This chapter describes commercial software and a discussion of what is not commercial software. It identifies categories and types of commercial software, including operating software, utilities software, and application programs. It further explains that changes in commercial software are among the fastest in the entire field of FIP resources and discusses the life cycle process for the acquisition of software.

This chapter explains key software terms. It also provides examples of “minor modifications,” “maintenance updates,” and “new versions.” It also explains the need for language in a contract to exclude beta versions (prototypes) and vaporware.

Not all software is FIP software. Some software is “embedded” in non-FIP equipment. For example, special software that is embedded in a blood analyzer is currently considered non-FIP software.

One section distinguishes among and explains various methods available for acquiring commercial software. It will also distinguish effect on pricing of minor modifications, maintenance updates and new versions.

Another section distinguishes among the various methods of acquisition available for acquiring commercial software, including single license, multiple licenses, and site license.

The final section discusses current major issues involving commercial software.

(continued on next page)

Chapter Overview *(continued)*

Topics in This Chapter

This chapter includes the following topics:

SECTION	TITLE	PAGE
12.1	What is Not Commercial Software	12-7
12.2	Key Terms in Commercial Software Acquisition	12-10
12.3	Categories and Types of Commercial Software	12-11
12.4	Common Pricing Structures and the Effect on Licenses	12-14
12.5	Commercial Software Life Cycle	12-16
12.6	Methods for Acquiring Commercial Software	12-19
12.7	Current Major Issues Involving Commercial Software	12-32

References

It is recommended that you have the following references available in order to understand the topics in this chapter:

- FAR Subparts 6, 14, 19
- FIRMR 201-4.001
- FIRMR Bulletin C-12 on the Federal Software Exchange Program
- DFARS 252.227-7013 and DFARS Subpart 227.4
- FIPS PUBS applicable to commercial software
- GSA Guidebook - “A Guide for Acquiring Commercial Software”
- GSA Guidebook - “Guide for Requirements Analysis and Analysis of Alternatives”

Key Terms in Commercial Software

There are several key terms in acquiring software that you should understand. The table on the following page shows these key terms in alphabetical order. You should also consult the Glossary at the end of this text, if you see a term you do not understand.

(continued on next page)

Chapter Overview *(continued)*

KEY TERMS IN SOFTWARE	
Beta Version	a prototype version of software, before complete “debugging.”
Brand Name or Equal	a commercial software product or its equivalent.
Commercial Software	software developed at the contractor’s expense and available for sale or leasing to the general public.
Common-Use Software	software that deals with applications common to many agencies, that would be useful to other agencies, and is written in such a way that minor variations in requirements can be accommodated without significant programming effort.
Compatibility-Limited Specifications	specifications which state that the required software must be compatible with existing hardware and/or software on hand in the requiring agency.
Conversion Study	a study to determine the impact on cost and time of relocating software from one hardware/operating system to another.
Data Linking	the ability to embed references to data which has been developed with another application within the current application. For example, a common use of data linking is linking a word processing application to a spreadsheet package. It uses “dead links,” “live links” or “object- oriented programming” (OOP).
File Conversion Utilities	software programs used to convert data between the de facto standard and a vendor’s proprietary software package. Contractors are usually willing to provide file conversion utility programs as part of a commercial software package.
File Import/Export	the ability to read and write data files directly to or from a de facto standard format. The most commonly used method to do this is ASCII.
Graphical User Interface (GUI)	the use of “icons” or objects which represent a function on the computer screen (usually in a “pull down menu”). The user activates the function by pointing at the icon with a “mouse.” Common examples include the Macintosh and Microsoft Windows.
Hostile Software	software programmed to delay, damage, or destroy other software.
Integrated Software Packages	computer software applications packages which are fully linked and offer multiple applications, usually word-processing, graphics and spreadsheets. An example is Microsoft’s “Works.”
Intermediate File Formats	a format used when the conversion utility does not work with a file conversion utility because it cannot convert directly to a de facto standard. In this case, a software package first converts the proprietary file to an intermediary and another software package then converts the intermediary file into a proprietary file.

(Terms continued on next page)

Chapter Overview *(continued)*

KEY TERMS IN SOFTWARE	
Software Conversion	modifying programs and data used on one system so that they can be used on another system. Sometime the cost of conversion can be greater than the cost of acquiring new commercial software.
Software Documentation	printed material which explains how the software operates
Specific Make and Model Specifications	specifications that describe the exact commercial software product required.
Template	a part of software which acts as a generic “framework” or set of instructions to permit easy customization by a programmer
Vaporware	commercial software which does not yet exist in a format fully developed for prototyping, testing, or sale/lease.

12.1 What Is Not Commercial Software

What is Not
Commercial
Software

FIRMR Bulletin A-1

The following are NOT commercial software:

- Software embedded or included in the price of equipment;
- Embedded software, such as software used in weapon systems and machinery. This type of software is typically not acquired separately from equipment it supports.
- Software not available for lease or purchase in the commercial market place by the date set for receipt of proposals ; and
- Public domain software available from Special Interest Groups (SIGs) through electronic bulletin boards or such devices .

If you are acquiring special software developed at Government expense, or software already embedded in a machine, such as a computer-operated elevators, you are NOT acquiring commercial software.

Beta Versions and
Vaporware

One risk in the acquisition of commercial software is the issue of *Beta* versions (prototypes of software) and vaporware. Often, it is in the interest of an offeror to propose either a Beta version or vaporware as part of a FIP acquisition, because it passes the cost of completion on to the Government.

Both Beta versions and vaporware pose a serious problem to a timely acquisition. Both are not fully developed versions of software and the effort and cost to complete development is a risk that should not be assumed by the Government in most cases.

Because Beta versions are further along in development, they are somewhat less risky. However, even a Beta version of commercial software may contain serious defects that have not yet been discovered and corrected. The problem is that some of these serious defects can only be discovered after intensive use and defects can be so serious that they can cause an entire system to fail.

Vaporware is even more risky from the Government's point of view as a purchaser. Usually, vaporware may consist of no more than a design (process flow diagram) for the software. Little of the software may have been written. There can be no reasonable guarantee that vaporware can be delivered on time and according to design and performance specifications.

(Topic continued on next page)

12.1 What Is Not Commercial Software *(continued)*

Beta Versions and
Vaporware
(continued)

For these reasons, it is very rarely in the Government's interest to accept either Beta versions or vaporware as part of a FIP software acquisition solution.

It is strongly recommended that a requirement for software acquisition be written to include language that prevents acceptance of Beta versions and vaporware.

Non-contractual
Considerations for
Developmental
Software

Begin Early. *The GSA Guidebook warns you to begin the acquisition process for software as early as possible, because the process can be complex and take up to 18-24 months for a large negotiated procurement.*

Consult FIPS PUBS. If you are not familiar with the requirement, you may have to ask technical experts and do some research. You can also consult the FIPS PUBS for guidelines on software.

The National Institute of Standards and Technology (NIST) provides FIPS PUBS for scientific services and advice to Government agencies on FIP standards, including software. NIST publishes standards, guidelines and program information documents in seven categories. If you have some questions about software maintenance, consult FIPS PUB 106, "Guideline on Software Maintenance." Ensure you understand various alternatives proposed in the requirements analysis.

Remember, you are not expected to become an expert on software, but you should understand what the acquisition is about before you continue to review a requirements analysis.

Is a Conversion Study Needed? If there is something unclear or incomplete in the requirement, ask for any necessary clarification. For example, if the requiring activity has specified a specific make and model, a sole source, or a compatibility-limited requirement, make sure that a conversion study has been performed and any necessary justifications have been prepared.

12.1 What Is Not Commercial Software *(continued)*

Non-contractual
Considerations for
Developmental
Software

Noncontractual Options:

Noncontractual options include:

- **Do nothing.** If your analysis shows that cost of obtaining software will be greater than benefits, the best acquisition option will be to do nothing.
- **Reassign software within the agency.** If it is possible, reassign copies of existing software within the agency, as long as this does not violate licensing agreements.
- **Reschedule software use.** Another noncontractual option is to reschedule use of existing software so that more than one activity or office can use it. Again, make sure this will not violate any licensing agreements.
- **Change work shifts.** If it is possible, the agency may be able to schedule use of existing copies of software by splitting personnel into more than one shift.
- **Re-engineer the existing software.** If it is possible, another noncontractual option may be to re-engineer the existing software. This might be done with either in-house resources or through an existing support services contract without purchasing new software.
- **Share with another agency.** A final noncontractual option is to share copies of existing software with another Government agency, on a timesharing basis. For example, the National Institutes of Health offer such timesharing arrangements to other Federal agencies. Again, make sure that such arrangements will not violate any software licensing agreements.

12.2 Key Terms in Commercial Software Acquisition

Software Considerations

Other aspects of FIP resource acquisition (hardware and services) have their own unique considerations which must be observed to minimize problems in the acquisition. This is also true of software acquisition, including commercial software. This section of the chapter presents a detailed discussion of the unique considerations associated with acquisition of commercial software.

Remember that commercial software may be acquired either *separately* or as an integrated part of a FIP resources system of hardware, software and services.

Definition of Commercial Software

GSA Guide
DFARS 270.200

GSA's "A Guide for Acquiring Commercial Software" defines commercial software as "*software that is available for lease or purchase in the commercial market from a concern representing itself to have ownership or marketing rights in the software. Software that is furnished as part of the ADP system but that is separately priced is included.*" The DFARS defines commercial software as *that software developed at private expense and available in the commercial market through lease or purchase (including licensing agreements) from a concern representing itself to have ownership and/or marketing rights in the software. Software which is furnished as part of a computer, but is separately priced from the computer is included in this category.*

For example, if you have ever purchased a word processing application or a computer game for a child, you have bought commercial software.

DFARS 227.471

In addition the DFARS defines "*commercial computer software*" as *computer software which is used regularly for other than Government purposes and is sold, licensed, or leased in significant quantities to the general public at established market or catalog prices.*

You can see that the key to defining commercial software is that it must have been developed at private expense of an offeror or author and be available to the general public.

12.3 Categories and Types of Commercial Software

Categories of Commercial Software

You will find that commercial software products fall into three broad categories: *operating environment*, *applications development*, and *utility software*.

- *Operating environment* supports the operation of hardware and software on a single platform. System software can also support the development and operation of application software. System software includes the operating environment, applications development, and *utility* software programs. This is the type of software that makes your computer “run” or operate. It performs such functions as running the operating system, security, job scheduling, transaction processing and performance monitoring.

Operating environments usually come already “loaded” in the hardware, but can also be installed either as original packages or as updates.

- *Applications development software* is the software which most of us use to support daily work activities. Application software includes office and functional programs such as word processing, graphics, spreadsheets, and data bases.
 - *Utility software* performs those functions required to support the applications programs, such as code conversion, copying, disk management, backup, and archiving. For example, when you order your computer to print a letter, you are using the utility program. The utility program software, like the operating environment software, usually comes already mounted in the computer.
-

(continued on next page)

12.3 Categories and Types of Commercial Software *(continued)*

Types of Commercial Software

In addition to the three broad categories of commercial software, you may sometimes hear about “types” of commercial software. *Do not confuse types of commercial software with categories of commercial software.* The most common types of commercial software that you may hear mentioned include:

- *Shrink-wrapped commercial software.* This is commercial software that is completely self-contained and requires little or no modification. Most of it is application software. You can usually install it using only floppy diskettes and the user’s manual. You would usually use this type of commercial application software on a single microcomputer, such as your desktop computer.
- *Multi-user Software* intended to be used on a minicomputer, mainframe computer or server, may require the services of technical personnel to install, maintain and periodically service, but requires no modification to the applications package itself.

For example, if you acquire a data base applications package to be mounted on a server so that many persons in the office can use it (multiuser software), you will probably need technical assistance to install it, but the software will not require any modifications, although a vendor will probably have to service it periodically.

- *Customized packaged software* is commercial software which provides certain functions already “built in,” but requires additional software development in order to provide all the functions required by the requiring agency. Customized software often requires significant vendor support services, such as design, training, and maintenance. You may obtain these support services at the time of acquisition from the same vendor, or from a third party.

Matching of Applications to Requirements

There are many packages of application software to support many different requirements. The following table is adapted from the GSA Guide and shows most of the common types of commercial software which are available to match the most common requirements.

(continued on next page)

12.3 Categories and Types of Commercial Software *(continued)*

Table for
Matching
Requirements and
Available
Software

Requirement...	Available Software...
• Heavy typing of reports memos and studies; many revisions	Word Processing
• Combining graphics and text; producing document for external distribution	Desktop Publishing
• Producing form letters	List processing
• Filling large numbers of standard forms	Forms Processing
• Short memos or messages	Electronic mail
• Accessing main frames; transferring data files	Telecommunications
• Manipulating numbers	Spreadsheet
• Maintaining data and indexes	Database management
• Document searches	Text retrieval
• Presenting numerical data in graph formats	Business graphics
• Free-form graphics	Drawing
• Project management	Project management
• Scheduling	Calendar
• Reviewing data in data bases	Executive information systems
• "What-If" financial analysis; modeling	Decision support system
• Analysis of data	Statistical analysis

Customizing
Commercial
Software

In many cases, it will be possible to acquire commercial software that meets agency requirements "as is" with no further modifications or programming required. However, in some cases, an agency may require that a commercial software package be "customized" to meet the agency's special needs. For example, an agency may need to customize a certain commercial database to add special features. Many commercial software packages contain a "template" to permit easy customizing or modification. A template is a sort of built-in software framework which allows a programmer to change the software. In some cases, the ease of customizing, and amount of programming needed, may be important factors in source selection.

12.4 Common Pricing Structures and the Effect on Licenses

Terminology

This section explains key terminology, pricing structure, and licensing arrangements that you may encounter in a commercial software acquisition.

Effect of Licensing on Pricing

The type of license that you acquire will also have an effect on the pricing. Usually, the licensing agreement will be either:

- A. *Single license*, limited to one computer and one user (e.g., your home computer);
- B. *Site license/Enterprise License*, is for use by any site or location connected with an enterprise, project, or program. Enterprise can be defined as a physical location or an entire agency.

Contractors who have commercial software packages seek to maximize profit in the shortest time. They do this by licensing or leasing to as many sites and platforms as possible.

It is in the Government's best interest to enter into multiple-year licensing agreements with the vendor, who provides the agency's suite of commercial software products. Based on current market conditions most software resellers/developers will only enter into licensing agreements for a two-year period. This equates to a base contract performance period with one 12-month option.

General Licensing Considerations

Chapter 11, "Intellectual Property and Licensing Agreements," provides information on general licensing considerations on page 11-18. As a contract specialist, you should be aware that each of these areas can be a negotiation issue.

12.4 Common Pricing Structures and the Effect on Licenses *(continued)*

Minor
Modifications,
Maintenance
Updates, and New
Versions

The competition to develop and market commercial software is very strong, although different applications programs may not be compatible with one another. This strong competition means that commercial software companies constantly strive to upgrade and improve their version of software programs. Some major software companies release a *minor modification*, a *maintenance update* or a *new version* frequently, in order to stay current with competitor's products, and to encourage customers to keep upgrading.

Each of these has a different pricing structure and effect on licenses for commercial software.

- A *minor modification* is a relatively minor change to existing software, usually adding or enhancing a particular feature, such as ease of use, of the existing software. Usually, the vendor will charge only a small nominal fee for the minor modification. For example, some minor modifications for popular word processing applications programs are available for as little as twenty to thirty dollars apiece.
 - A *maintenance update* is a more extensive change to a commercial software package. A maintenance update may contain a number of new upgrades of added features, usually to a software program that is several years old. The vendor will normally charge more for a maintenance update, sometimes several hundred dollars for each licensed or leased package. For example, a vendor may offer an update in a data base package. Typically, the update is identified by adding a decimal point and a number and/or letter to distinguish the new update from the older version, such as 5.1 or 5.1a. A maintenance update may be called a "new release."
 - A *new version* is commercial software that is intended to supersede or replace the older versions available to the public. Usually, the new version of commercial software contains many features that are not available with the older versions and may even be fully or partly incompatible with the older versions. Usually the vendor will demand more money for a new version than for a minor modification or maintenance update. The vendor may not even grant any credit for purchase of earlier versions and require each purchase to be at the new higher cost.
-

12.5 Commercial Software Life Cycle

Background

The acquisition of commercial software is similar in many ways to the acquisition of any other commodity, but there are some special considerations. Likewise the life cycle process is similar, but there are some special considerations. These differences are emphasized in this section.

Life Cycle Process for Acquisition of Commercial Software

The GSA Guide Book for the acquisition of commercial software warns that a large scale commercial software acquisition can take up to 18-24 months for completion. This is important because, compared to most other FIP resources, *commercial software has a relatively short life cycle*.

Because of this shorter life cycle, vendors and software developers must maximize profit, and sell or license commercial software packages (especially applications) as fast as possible, before a competitor releases a newer version that makes its version obsolete or less desirable to the market.

Illustration of the Life-Cycle for Commercial Software

As with all system life cycles, the system life cycle for commercial software begins when a need is established, and ends when a contract is closed out and the user disposes of the software. Disposal of the software is dependent upon the terms of the contract's licensing agreement. The *life-cycle for commercial software acquisition has five phases*. Each of the five phases also has several steps. The GSA Guide for Acquiring Commercial Software lists the phases and steps shown in the table on the following page.

(continued next page)

12.5 Commercial Software Life Cycle *(continued)*

Illustration of the
Life-Cycle for
Commercial
Software
(continued)

THE COMMERCIAL SOFTWARE LIFE-CYCLE	
PHASE	“STEPS”
Planning	<ul style="list-style-type: none"> • Identifying Automation Needs • Planning • Budgeting
Acquisition	<ul style="list-style-type: none"> • Requirements Analysis • Analysis of Alternatives • Developing the Solicitation Package • Developing the Source Selection Plan • Advertising the Requirement • Issuing the Solicitation • Receiving Proposals • Source Selection
Implementation	<ul style="list-style-type: none"> • Installation • Acceptance • Training • Conversion
Operation and Maintenance	<ul style="list-style-type: none"> • Maintenance • Support • Enhancement
End of Life-Cycle	<ul style="list-style-type: none"> • Contract Closeout • Disposition

(Adopted from *A Guide for Acquiring Commercial Software*, Acquisition of Information Resources, GSA, 1990)

(continued next page)

12.5 Commercial Software Life Cycle *(continued)*

Similarities and Differences

You can see that the system life cycle for commercial software acquisition is very similar to most other system life cycles that you have seen.

However, there are several key differences.

- *Planning Phase differences.* First of all, in the Planning Phase, remember that a large, complex commercial software acquisition may take up to two years, so you must try to minimize delays by identifying the requirements and conducting the acquisition planning as soon as possible. To minimize delay, you should ask “up front” whether a software solution has been considered, before you expend a great deal of time on a hardware acquisition.
- *Acquisition Phase differences.* One key difference in the acquisition phase is the *requirement for a conversion study*. A conversion study is often required if the “old” software is supposed to be compatible with new hardware and software.

Another key difference in this phase is that, during the market study in the analysis of alternatives, you may find that there will be less than full and open competition.

- *Implementation Phase differences.* In the Implementation Phase, some key differences between commercial software and other system life-cycles concerns the steps for installation, acceptance and conversion. The initial installation for large main-frame computers and LANs will typically be performed by computer specialists from the contractor, not Government personnel.

The Government will then typically operate the software for a testing period or transition period until it finally accepts the installed software. Typically, the Government will choose, as a safety measure, to continue to operate the “old” software side-by-side with the new software until acceptance.

Conversion is the third major difference in the Implementation Phase. Often, the requiring agency will have very large files to convert from the old software formats to the new software format, and may require contractor assistance as part of the acquisition.

12.6 Methods for Acquiring Commercial Software

Background

This section discusses the methods for acquiring commercial software. You may recall that commercial software may be acquired either as a separate acquisition, or as part of a larger FIP resources system

Requirements for Full and Open Competition

As you have learned, one of the goals and objectives in the acquisition of commercial software is to maximize competition. However, you have also learned that a market survey for commercial software may often reveal that there is less than full and open competition in the market place for commercial software. Nevertheless, your goal is to always attempt to maximize competition in a commercial software acquisition.

You will recall that the FAR describes three degrees of competition:

- Full and open competition;
- Full and open competition after exclusion of sources (including small business set-asides and 8(a) set asides; and
- Other than full and open competition.

Excluding Sources

There are times when you may be able to exclude some sources. This exclusion of sources may be possible when:

- Establishing or maintaining alternative sources; or
- Establishing a set-aside for small business and labor surplus areas; or
- Following procedures of implementing the Small Business Act, Section 8(a).

FAR Part 19

Of these three exclusions, in the case of commercial software acquisition, you will only be concerned with small business set-asides and 8(a) contractors. Many software companies qualify as small businesses, until they become very successful and grow larger. (See FAR Part 19 for policies and procedures on set-asides and the 8(a) program).

In addition, there are times when you may acquire commercial software under certain conditions without full and open competition.

(continued on next page)

12.6 Methods for Acquiring Commercial Software *(continued)*

Compatibility- Limited Requirements

Requirements for other than full and open competition with appropriate justification has been previously covered. However, in a commercial software acquisition, you will more often deal with the issue of compatibility-limited requirement. This type of commercial software requirement claims that any new software must be compatible with the software already on hand in the requiring agency.

If you receive a compatibility-limited requirement, you should usually ask for a conversion study, before completing justification. (See Chapter 25, “Determining If Conversion Studies Are Necessary.”)

The conversion study may show that the files can be converted or that the agency can switch to another commercial application software.

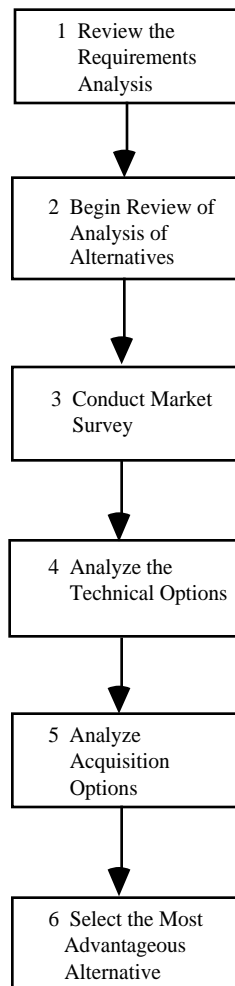
(continued on next page)

12.6 Methods for Acquiring Commercial Software *(continued)*

Sequence of Events and Actions in Acquiring Commercial Software

Once you have received a requirement for commercial software, you should follow a certain sequence of events and actions to make sure that you conform to all the statutory requirements and regulations in order to minimize the risks and increase the chances of success.

The following flow chart shows the step by step sequence of events recommended for the acquisition of commercial software. Note that this flow chart emphasizes the actions to be taken by the acquisition team. The contract specialist performs steps 5 and 6. However, the contract specialist is responsible for documentation and review of steps 1 through 4.



(continued on next page)

12.6 Methods for Acquiring Commercial Software *(continued)*

Step 1—Review the Requirement Analysis

The first step is to review the requirement thoroughly. Take the time to read the requirements analysis completely until you understand it. If the requirements analysis is for a common item of commercial software, you may have no trouble understanding it. In fact, you may be very familiar with the required commercial software.

However, in many cases, the requirement may be for a very unusual or unfamiliar type of commercial software, such as might be used in computer-assisted software engineering (CASE) or computer-assisted manufacturing (CAM).

Checklist for Any Key Assumptions and Constraints. This is the type of information that you will require at this point to understand the requirements analysis, and later to develop the appropriate negotiation areas for the licensing agreements.

Check the following list when reviewing the requirement analysis.

CHECKLIST FOR KEY ASSUMPTIONS AND CONSTRAINTS
<ul style="list-style-type: none"> Is there any special requirement for customization of the commercial software? (Customization means the addition of agency-specific information to the commercial software.) If so, this will add to the cost, depending on the scale of customization.
<ul style="list-style-type: none"> What are the desired licensing agreements? Does the requiring agency need a single license, a multiple or a site license? Which site locations?
<ul style="list-style-type: none"> Are the requirements for training, maintenance and support (if any) clearly specified?
<ul style="list-style-type: none"> Are there any special security requirements?
<ul style="list-style-type: none"> Is necessary language included to exclude Beta versions and vaporware?
<ul style="list-style-type: none"> Does the requiring agency have a need to disclose any of the technical data or documentation associated with the software to other parties, including other contractors who might be competitors of the vendor? Is there a requirement for access to the source code?
<ul style="list-style-type: none"> Is there a need to apply the licensing agreement to any subsequent version of the commercial software?
<ul style="list-style-type: none"> What is hardware on which this commercial software will be used? Is it clearly specified?
<ul style="list-style-type: none"> What will be the disposition of the software at the end of the contract term?
<ul style="list-style-type: none"> Are the essential requirements (“must have”) clearly separated from the desirable requirements (“nice to have”)?

12.6 Methods for Acquiring Commercial Software *(continued)*

Step 2 - Begin Review of Analysis of Alternatives

The purpose of the Analysis of Alternatives is to evaluate the cost and benefits of the various alternatives contained in the requirements analysis.

Once you fully understand the requirement, key assumptions and constraints, and are certain that any necessary conversion studies and justifications have been done, you are ready for the next step, reviewing the analysis of alternatives.

As you begin your review, you will assure that the technical team has *defined and examined the acceptable technical options*.

As you conduct your review, remember that there are some key factors for a successful analysis of alternatives that you should look for.

- **Did the technical team complete the analysis of alternatives BEFORE deciding on a solution?**

Sometimes, there is a temptation to jump to a conclusion or “best solution” before going through a fair analysis of alternatives. Do not allow yourself to be pushed into a preferred solution or alternative by the requiring agency without a fair and complete analysis.

- **Did the technical team reach consensus, and document all assumptions and constraints?**

Remember that nearly all plans and projections and requirements are based on some kind of assumptions and constraints, which may be wrong. Make sure that these are clearly written out. You may be surprised to find out that the assumptions have sometimes not been written down, because “everybody knows that...”

(Topic continued next page)

12.6 Methods for Acquiring Commercial Software *(continued)*

Step 2 - Begin
Review of
Analysis of
Alternatives
(continued)

- **Did the technical team use a limited set of key criteria to distinguish among options.**

Usually, you can judge and evaluate each alternative based on no more than a few criteria. Usually, five or six key criteria are all that you will need to review the Analysis of Alternatives.

Rank these key criteria, starting with the most important and working downward to the least important. Of course, the “must have” or essential requirements take priority over the “nice to have” or desirable requirements. If you try to use too many criteria for evaluation of the alternatives, you may become confused and give too little value and weight to the really important criteria, such as “capability” or “ease of use.”

- **Did the technical team NOT automatically eliminate those alternatives or options that cannot provide desirable features.**

Remember that desirable features (“nice to have”) are not as important as the valid mandatory features.

- **Did the technical team recognize that software requirements and alternatives change over time.**

The area of commercial software is very dynamic and changes rapidly. Requiring agencies often increase their requirements frequently, several times per year as requirements and new capabilities are added. Do not be surprised if you have to change the original requirements after you have begun the Analysis of Alternatives.

- **Did the technical team test the sensitivity of an analysis to changes in key assumptions and constraints.**

Key assumptions and constraints may not remain valid. If they change, you may have to change one or more parts of your analysis or your conclusion. For example, if a key performance constraint was that “the software must be installed and fully operating within 30 days,” and you later find that you have much more time, that might change your analysis and conclusions.

(continued on next page)

12.6 Methods for Acquiring Commercial Software *(continued)*

Step 3—Conduct Market Survey

Although the market survey is performed by the contract specialist for most acquisitions, for a FIP resources acquisition, the contract specialist assists the technical and program personnel in conducting a market survey for the Analysis of Alternatives documentation. You have already learned the importance of a market survey in an Analysis of Alternatives. The market survey is crucial to the Analysis of Alternatives, especially for commercial software. However, you may find that a market survey for commercial software can be somewhat different than a market survey for other types of FIP resources.

Remember, one major difference in a market survey for commercial software is that there is less chance of free and open competition.

Many types of commercial software, from different developers and companies, may not be compatible with one another. The developers of commercial software wish to maximize profit by selling or leasing commercial software which is proprietary, so compatibility with other companies' software is not one of their goals.

As a result, requiring agencies often feel obliged to specify a requirement for "sole source," "specific make and model," or a "compatibility-limited" requirement. Of course, this limits full and open competition. Nevertheless, you must still conduct a thorough market survey, because it is crucial to the Analysis of Alternatives.

Objectives of a Market Survey for Commercial Software. The objectives of a market survey for commercial software are similar to those for any market survey. When you conduct a market survey you will be trying to:

- **Verify the technical feasibility of the requiring agency's requirements.**

You will try to determine if each of the alternatives are technically feasible. Find out if any vendor can technically satisfy the requirement. If not, you should notify the requiring activity and ask it to revise or remove the requirement.

- **Determine the amount of competition available to provide the capabilities required.**

If the requiring activity placed any restrictions on the requirement, such as sole source, specific make and model, or a compatibility limitation, there may be very little or no competition.

(Topic continued on next page)

12.6 Methods for Acquiring Commercial Software *(continued)*

Step 3—Conduct
Market Survey
(continued)

Objectives of a Market Survey for Commercial Software *(continued)*

- **Collect pricing information for cost estimates and comparative cost analysis.**

Try to collect the likely price for each alternative and for each likely supplier or offeror.

- **Determine the industry norms and business practices for this type of software product.**

For example, you might try to determine how frequently this type of commercial software is upgraded; what are the typical warranties and licensing agreements for this type of acquisition.

What Solutions Are Available? Overall, your basic goals in the market survey is to ask and determine the answer to the questions, “*What technical solutions are available in the market place?*” and “*What is the best acquisition option?*” The technical and program personnel are primarily responsible for the technical solution. You, as a contract specialist, are responsible for the acquisition option.

Sources of Information for a Market Survey. There are several sources of information for your use in a market survey for commercial software:

- *Industry and Government publications*, such as Datapro and the Thomas Register are available in most Government offices.
- *Trade show literature* is available at various exhibitions throughout the country each year, or by writing to associations or individual vendors;
- *Product demonstration*, which you can request from various vendors of commercial software, including on-site demonstrations at Government locations;
- *Vendor marketing literature*, such as brochures, (although these may have limited value because they show only the best features and do not discuss any shortcomings);
- *Government user groups* often include one or several technical experts who are familiar with the commercial software; and
- *Information concerning product acceptability maintained by the information management group*, which collects and maintains files on this type of information.

(Step 3 continued on next page)

12.6 Methods for Acquiring Commercial Software *(continued)*

Step 4—Analyze the Technical Options

Types of Factors to Consider. *(continued)*

Life-cycle cost. This is often a key discriminator in very large acquisitions of commercial software that are intended to be used for some years at many sites. The consideration of life-cycle costs analyzes not just the initial purchase or licensing cost, but the entire cost of the commercial software over the expected life cycle.

For example, if the *recurring costs*, such as training and maintenance, will be too high, that might offset low *nonrecurring costs* (the purchase price) and make the total life-cycle costs too high overall.

Availability. The availability of a commercial software package is also often used as a key discriminator. The software must be available during the time frame and in the quantities and with the capabilities required. *This is one area where you must be careful about Beta versions and vaporware.* Often, a potential source might make extravagant, but inaccurate, claims about the availability of its software. Software in prototype (Beta versions) or in vaporware are not considered to be available because they may require extensive further development.

Risk. This factor is often related to availability. Generally, a commercial software package that has been on the open market successfully for some time offers a low risk to the Government, because it should have all the bugs worked out. On the other hand, a software package still under development, even if it promises to be much better than anything available on the market now, offers a higher degree of risk. You must understand the degree of acceptable risk in the acquisition.

Effect on competition. One key discriminator that may often be misunderstood is the effect on competition. If the Government continually buys very large quantities of one commercial software package, it can have the effect of discouraging or even stifling competition. Smaller vendors in particular, may never generate the number of sales necessary to recover development costs if the Government always buys from one larger rival. You can see that this is one reason why “portability” of software is important to competition.

These are only some of the most frequently used discriminators. You may find that it is necessary to recommend one or more additional factors to discriminate among technical options, depending on the acquisition.

(continued on next page)

12.6 Methods for Acquiring Commercial Software *(continued)*

Step 5—Analyze Acquisition Options

Once the best technical option has been recommended, you are now ready in the Analysis of Alternatives to *analyze the best acquisition option*. For any acquisition of commercial software, there are usually a number of options. Your acquisition options will depend on the answers to the following kinds of questions:

- What is the long-term viability of a noncontractual option? (If you select a noncontractual option, how long will this solution last?)
- Are the range of available resources adequate to support a noncontractual option? (For example, does the requiring agency really have the time and personnel to work in shifts?)
- What are the customization requirements? (If you obtain software from a noncontractual source “as is,” can the agency handle customization in house without further contractual help?)
- What is the control and priority over the software resources? (For example, if you decide to share software, rather than buy, who determines the priority in using the software?)

If you obtain suitable answers to these kind of questions, then you may decide on noncontractual options. Otherwise, you will have to rely on contractual options for software acquisition.

The following information shows the most likely acquisition options that you should analyze.

(Step 5 continued on next page)

12.6 Methods for Acquiring Commercial Software *(continued)*

Step 5—Analyze
Acquisition
Options
(continued)

Contractual Options:

If for any reason the noncontractual options are not feasible, you must consider the contractual options. Contractual options include:

- **Small purchases.** The first contractual option for acquiring commercial software is through *small purchases*. This option can be used when the total award amount will not exceed \$25,000.
- **Established sources of supply.** Commercial software may be obtained from either *mandatory* or GSA *non-mandatory* sources of supply.

Mandatory sources of supply include:

- FTS 2000;
- Financial Management System Software (FMSS); and
- Agency specific mandatory sources.

GSA non-mandatory sources include:

- GSA Non-mandatory ADP Schedule Contracts;
- Agency specific non-mandatory contracts; and
- the Office of Technical Assistance (OTA).

Note that the same guidelines that apply for use of non-mandatory ADP Schedule Contracts also apply to a commercial software acquisition.

(Step 5 continued on next page)

12.6 Methods for Acquiring Commercial Software *(continued)*

Step 5—Analyze
Acquisition
Options
(continued)

FAR Part 14

2. Contractual Options: (continued)

- **Sealed bidding** is the third contractual option for acquiring commercial software. FAR Part 14 explains the requirements for sealed bidding. You will probably only use this contractual option if there is considerable competition, many qualified offerors, low risk to the Government, and the determination will be based solely on the lowest price. This does not always occur in a commercial software acquisition. Be cautious when using sealed bidding for software; problems may arise. It may be more appropriate to use negotiation.
- **Negotiated procurement** is the fourth and final contractual option. This will usually require extensive negotiations on price, schedules, technical factors, types of contract and other terms.

The GSA has delegated “threshold levels” or prescribed levels of procurement authority, which give procurement authority to all agencies for acquiring commercial software. This is known as “*Delegated Procurement Authority*” or *regulatory DPA*. The GSA may also give special delegations to agencies based on dollar limits.

Remember, both types of delegations permit an agency to acquire commercial software up to a designated dollar limit without GSA approval.

When you complete this step, you will have selected the best acquisition option. Now you are ready to go on and select the most advantageous alternative.

12.6 Methods for Acquiring Commercial Software *(continued)*

Step 6—Select the Most Advantageous Alternative

Once you have analyzed the acquisition options and selected the best acquisition option, you are finally ready to *select the most advantageous alternative*. In this final step, you will select that one alternative which offers the greatest advantage to the Government. Be sure that you fully document the reasoning behind your choice of this particular alternative, and obtain agreement and consensus from the requiring agency and any technical experts and other advisors. Your explanation should include a discussion of both price/cost and technical reasons.

In order to obtain consensus, you may have to conduct one or more formal briefings for the requiring agency, technical experts and other advisors. These briefings may also include the Source Selection Authority, if this is to be a formal source selection.

Once you have established consensus about the most advantageous alternative, this information becomes part of the acquisition objective and is written into the acquisition plan.

12.7 Current Major Issues Involving Commercial Software

Current Issues

There are currently several major issues involved in the acquisition of commercial software.

- Rate of Technological Change
 - Portability
 - Violation of Licensing Agreements
 - Hostile Software
 - Rapid Application Development
-

Rate of Technological Change

The first major issue you should understand about commercial software is the rate of technological change. The rate at which new versions and major upgrades appear is increasing, as software companies strive to bring new products to market more quickly than their competitors. A commercial software application package may become obsolete in about three years.

When you consider that it may take you two years for a large scale commercial software acquisition, you can see that there is a good chance that a particular application software package can easily become obsolescent during the acquisition process.

One example of technological change is the way in which commercial software is packaged. Most of us are familiar with software packaged in “floppy disks” or available electronically from LAN systems. However, an increasing amount of software is now also packaged in *CD-ROM* (*Compact Disc/Read Only Memory*) and in the *PCMCIA* standard.

PCMCIA (Personal Computer Memory Card International Association) cards are about the length and width of plastic credit cards, but slightly thicker, and are inserted into a special portable computer slot. (Note that PCMCIA cards can also be used to boost memory, add modems and network adapters.)

There is not much you can do about this speed of technological change in software as it affects the acquisition process. However, one thing you can do is to speed up the process to the extent that you can, such as by minimizing the delays over which you have any control. One way you can speed up the development of the RFP is by using an automated system to write the solicitation more quickly.

(continued on next page)

12.7 Current Major Issues Involving Commercial Software *(continued)*

Portability

Another major issue in commercial software acquisition is the issue of *portability*. Portability refers to the ability to use a software package on more than one type of platform.

You can see that it is not usually in the Government's interest to acquire software that is restricted to only one manufacturer's proprietary system. In other words, you should strive to achieve portability, so that the user can use the software on as many types and makes of computer as possible. *If you acquire software that is not portable, you may find that you cannot use it later on new types of computers, and you will have to buy new software all over again.*

Proprietary vs. Open Systems

The ideal, therefore is to acquire software that has maximum portability. Portability depends in part on the type of hardware operating environment. Some operating environments are *proprietary*. Other manufacturers cannot use them, and usually, only special proprietary software can run on them.

The opposite of a proprietary operating environment is an *open* operating environment. Some manufacturers publish the technical details about their operating systems, so that other manufacturers can also produce hardware which will accept and operate the same software. This is said to be an open system.

FIPS PUB 151

It is the Government's policy to support the use of open systems. For example, FIPS PUB 151 now requires open systems in all new commercial software acquisitions.

POSIX

The Government also supports an initiative called the *Portable Operating System Interface (POSIX)*. The purpose of POSIX is to encourage commercial software manufacturers to use open systems.

X/Open

In addition to FIPS PUB 151, you might also check the literature available from the X/Open association. X/Open is an independent, not-for-profit consortium of end users. It sells no products, but provides information on open systems. You can obtain information on open systems from X/Open by calling 1-800-568-OPEN.

(continued on next page)

12.7 Current Major Issues Involving Commercial Software *(continued)*

Violation of Licensing Agreements

Another current issue in software concerns the violation of licensing agreements. Most violations occur when one single user copy is copied many times for use by other persons. These “pirated” versions violate the licensing and copyright laws. For this reason, pirated software should never be tolerated or used on Government-owned computers.

In recent years, software trade associations have become more aggressive in seeking out violators and demanding large fines. Usually, a disgruntled employee provides a tip that persons in his/her former office are using pirated software.

In addition to the violation of the law, the use of pirated versions also exposes the user to hostile software.

Hostile Software

Hostile software is software that is intentionally programmed to delay, damage, or destroy other computer software and data. The effects of hostile software can be devastating, especially if the software spreads rapidly over a computer network. This can happen easily if the software is not obtained from a reputable source.

The most common types of hostile software are:

- viruses, which insert new code into existing programs and “reproduce” themselves, much like a biological virus;
- worms, which reproduce on their own;
- bombs, which activate at either a specified point in a program or at a specific clock time; and
- trap doors, which allow unauthorized users to gain access to a system.

Hostile software is often spread through electronic bulletin boards, pirated copies of floppy disks, and unauthorized access to computer networks.

Fortunately, hostile software can be detected by special anti-viral software, which can act as system execution monitors, file monitors and virus detectors. It is a good idea to mount a copy of anti-viral software on each computer, and to test all new software “off-line” on a computer not connected to the network, before using it to enter the network.

(continued on next page)

12.7 Current Major Issues Involving Commercial Software *(continued)*

Rapid Application Development (RAD)

Finally, one issue in commercial software that is growing in importance is the practice of Rapid Application Development (RAD). RAD is the practice of greatly speeding up the development of an applications software package, especially one-of-a-kind software, such as might be required by a Government agency.

In a RAD project, the software developer uses the latest computer-assisted software engineering (CASE) packages with graphical user interfaces (GUI) and very fast computer work stations and works very closely and intensively with the customer through the software development steps, such as information engineering, systems analysis, joint design, interactive prototyping and “debugging” to reduce the usual development time from about 18 months to as little as three months.

Advantage of RAD

The *advantage* of RAD is that it enables the requiring agency to obtain the needed customized application software package much sooner than normal (as little as three months versus 18 months for normal development).

Disadvantages of RAD

The *disadvantage* of RAD is that it requires extremely close cooperation and commitment of technical personnel resources to work with the software developer.

Unless the requiring agency can make the intense personnel commitment that is necessary for success using RAD techniques, you are not advised to request RAD in a solicitation.

Costs of RAD

Also, if a requiring agency urgently needs an application developed using RAD techniques, it may be necessary to pay a higher price, because the software developer may plan on overtime and compress the labor costs into a very short period.

Of course, you should require full justification if the requiring agency makes such a request.

Use of Cost Plus Incentive

If the time pressures for completion and availability are really urgent, you may decide to use a Cost Plus Incentive type of contract to provide an incentive for the software developer to complete by a certain date.

12.7 Current Major Issues Involving Commercial Software *(continued)*

Decision Table for
RAD

The following decision table summarizes your actions if you should receive a requirement for RAD in a software procurement.

DECISION TABLE FOR A RAD REQUIREMENT	
If...	Then...
<ul style="list-style-type: none"> • A requiring agency has an urgent requirement for early development of an application software package... and... • Can justify the requirement... and... • Can commit the personnel resources required for intensive development and cooperation with the software developer... 	Consider RAD...
<ul style="list-style-type: none"> • Time pressure is urgent and funding is available... 	Consider a Cost Plus Incentive contract.

SUMMARY

In this chapter you learned to distinguish among and choose the appropriate method of acquisition available for acquiring commercial software. In the next chapter, you will learn about the statutes, OMB circulars, and other regulatory requirements which apply to or have impact on acquisitions of telecommunications.

CHAPTER 13

LAWS AND REGULATIONS APPLICABLE TO TELECOMMUNICATIONS

Chapter Vignette

“So far, we have been discussing hardware, software, and services for a FIP resource acquisition,” said Marcia.

“Of course, there is more,” she added, “and that is telecommunications. Increasingly, computers talk to each other in the same office or in other offices anywhere in the country or in the world. Many experts argue that computers, telephones, Fax machines and even television are all merging into telecommunications and soon we will think of these as components, not as separate entities, as we do now. In the meantime, let’s look at the laws and regulations that apply to telecommunications.”

Course Learning Objectives

At the end of this chapter, you will be able to:

Overall:

Explain the statutes, OMB Circulars, and other regulatory requirements which apply to or have impact on acquisitions of telecommunications.

Individual:

- 13.1 Determine regulations, or provisions of regulations, or policies that apply to (or have unusual impact on) the acquisition of FIP resources including:
 - FIRMR Parts 201-4.001, 201-20.103-7, 201-20.303, 201-20.305, 201-20.306, 201-20.6, 201-24.1, 201-39.8, 201-39.1002-1, 201-39.1002-4, and 201-39.5202-2.
 - FIRMR Bulletins A-1, C-1, C-3, C-5, C-6, C-8, C-9, C-10, C-11, C-13, C-15, C-16, C-18, C-19, C-20, C-21, C-22, C-23, and C-34.
 - FAR Parts 7, 10, and 39 (DFARS 239.74)
- 13.2 Determine laws and regulations applicable to the FIP resources industry, to include:
 - FCC Rulings,
 - Tariffs,
 - Carterfone decision,
 - Modified final judgment (MFJ), and
 - Computer Inquiry II.

Chapter Overview

Scope

This chapter will explain statutes, OMB Circulars, and other regulatory requirements which apply to or have impact on acquisitions of telecommunications. Telecommunications is a special part of FIP resources and is heavily regulated.

FIRMR and FAR. This chapter will explain how to determine the regulations or provisions of regulations, or policies that uniquely apply to, or have unusual impact on, the acquisition of FIP resources, including the FIRMR and FAR Parts 39, 7, and 10.

Laws. You already learned of the laws that have a major impact on the acquisition of FIP and telecommunications resources. You will recall that these included the:

- Brooks Act (P.L. 89-306)
- Warner Amendment (P.L. 97-86 and P.L. 99-500)
- Paperwork Reduction Act (P.L. 96-511)
- Paperwork Reduction Reauthorization Act of 1986 (P.L. 99-500)
- Competition in Contracting Act (P.L. 98-369)
- Computer Security Act of 1987 (P.L. 100-235)
- Office of Procurement Policy Act (41 U.S.C. 423)
- Privacy Act of 1974 (P.L. 93-579)
- Various Patent and Trademark Laws (35 U.S.C.)

These laws are discussed in detail in Chapter 1, “Statutes that Apply to the Acquisition of FIP Resources.” They are also reviewed briefly in this chapter, along with several other laws that directly affect acquisition of telecommunications, including the:

- Service Contract Act of 1965 (41 U.S.C. 351-358); and
 - Telecommunications Accessibility Act of 1988 (P.L. 100-542).
-

(continued on next page)

Chapter Overview

Regulations. You will also recall from Chapter 2 that certain regulations have a major impact on the acquisition of FIP resources. These regulations are incorporated into OMB Circulars and include:

- A-76, *Policies for Acquiring Commercial or Industrial Products*;
- A-109, *Major System Acquisitions.*; and
- A-130, *Management of Federal Information Resources.*

These circulars are also reviewed briefly in this chapter. If you need a more detailed review, please see Chapter 2.

Rulings. This chapter will also explain the rulings applicable to the FIP telecommunications industry, to include:

- FCC rulings;
- Tariffs;
- Carterfone Decision;
- Modified Final Judgment; and
- Computer Inquiry II.

It will also review the impact of FIPS PUBS and Federal Standards for telecommunications.

Topics Covered in
this Chapter

This chapter includes the following topics:

SECTION	TITLE	PAGE
13.1	Regulations and Policies That Impact on Acquisition of Telecommunications Resources	13-6
13.2	Rulings Applicable to FIP Resources and the Telecommunications Industry	13-16

Chapter Overview *(continued)*

References

In order to understand the material and perform the procedures discussed in this chapter, you may require access to the following references:

- FIRMR Parts 201-4.001, 201-20.103-7, 201-20.303, 201-20.305, 201-20.306, 201-20.6, 201-24.1, 201-39.8, 201-39.1002-1, 201-39.1002-4, and 201-39.5202-2
 - FIRMR Bulletins A-1, C-1, C-3, C-5, C-6, C-8, C-9, C-10, C-11, C-13, C-15, C-16, C-18, C-19, C-20, C-21, C-22, C-23, and C-34
 - FAR Parts 7, 10, and 39; DFAR 239.74
 - OMB Circulars A-76, A-109, and A-130
 - GSA's "*Federal Telecommunications Standards Index*"
 - GSA Handbook, "*Managing End User Computing for Users With Disabilities*"
 - GSA Handbook, "*A Guide for Acquiring Telecommunications Equipment and Service*"
 - Federal Directory of Telecommunications Devices for the Deaf
 - *FTS2000 Agency Reference Guide* (published by the US Sprint Network).
-

13.1 Regulations and Policies That Impact on Acquisition of Telecommunications Resources

Definition of Telecommunications Resources

FIRMR 201-4.001

Telecommunications are a very special part of FIP resources and the acquisition of telecommunications resources requires you to have some special knowledge and make some special considerations. We often think of telecommunications resources mainly as the telephone, because it is the most visible part of telecommunications. However, FIRMR Part 201-4.001 states that telecommunications resources “*means telecommunications equipment, facilities and services.*”

Definition of Telecommunications Facilities

FIRMR Part 201-4.001 further defines telecommunications facilities as “*...equipment used for such modes of transmission as telephone, data, facsimile, video, radio, audio, and such corollary items as switches, wire, cable, access arrangements, and communications security facilities.*”

Definition of Telecommunications Services

Finally, FIRMR Part 201-4.001 defines telecommunications services as “*the transmission, emission, or reception of signals, signs, writing, images, sounds, intelligence of any nature, by wire, cable, satellite, fiber optics, laser, radio, or any other electronic, electric, electromagnetic, or acoustically coupled means. The term includes the telecommunications facilities necessary to provide such services.*”

You can see that this is a very broad definition of “services.” **Note that it includes some telecommunications facilities.** That is, some telecommunications facilities (such as dedicated lines) may be a part of telecommunications services.

In some ways, the most confusing part of FIP resource acquisition in the future may be acquisition of extensive telecommunications services. In fact, this definition of telecommunications services may be broader than you may first imagine. We often think of the telephone, computer and television as separate technologies, but these are rapidly merging into one huge world-wide technology.

Telecommunications is so vast and advancing so rapidly, that it demands a special emphasis in any discussion of FIP resource acquisition. This requires that you understand the laws, regulations, policies and precedents that affect telecommunications.

13.1 Regulations and Policies That Impact on Acquisition of Telecommunications Resources *(continued)*

Background

In Chapter 1 you learned about the statutes that apply to the acquisition of FIP resources, including telecommunications. In Chapter 2, you learned about the OMB Circulars that apply to FIP resources acquisitions, and Chapter 3 discussed the various policies that apply to the acquisition of FIP resources, including telecommunications.

Major Laws Affecting Telecommunications

First, you will recall that certain laws and statutes affect all FIP resource acquisitions, including telecommunications. Briefly, these laws and statutes include:

- the Brooks Act of 1965 (P.L. 89-306) established the basic policy for managing ADPE
- the Privacy Act of 1974 (P.L. 93-579) which mandated protection of sensitive information concerning individuals, that might be stored on Government FIP resources and protects the information which the Government keeps in Federal information systems
- the Paperwork Reduction Act of 1980 (P.L. 96-511) to ensure that ADP and telecommunications resources would be used to improve delivery of Government services, program management, increase productivity, reduce waste and fraud and reduce the information processing and reporting burden on contractors
- the Paperwork Reduction Reauthorization Act of 1986 (P.L. 99-500) which added telecommunications, computer software and computer-related services to the Brooks Act
- the Warner Amendment of 1981 (P.L. 97-86, P.L. 99-500) to the Brooks Act, which exempted the DoD from the Brooks Act, for certain defense-related requirements
- the Competition in Contracting Act of 1984 (P.L. 98-369) which mandated full and open competition (with certain key exceptions);
- the Computer Security Act of 1987 (P.L. 100-235), which required all Federal agencies to develop security plans for computer systems, including telecommunications networks

(continued on next page)

13.1 Regulations and Policies That Impact on Acquisition of Telecommunications Resources *(continued)*

Major Laws Affecting Telecommunications (continued)

- the Trade Secrets Act of 1905 (18 U.S.C. 351-358) which provided penalties for improper disclosure of trade secrets (now including telecommunications) entrusted to the Government;
- the Office of Procurement Policy Act (41 U.S.C. 423) which prohibits certain conduct by contractors and Government personnel in the course of Federal procurements (including telecommunications);
- Copyright Laws (17 U.S.C.) which allow for the realities of modern technology for copying software for backup and archival, but still try to protect unauthorized duplication of copyrighted software and documentation; and
- Patent and Trademark Laws (35 U.S.C.) which are intended to protect the rights of patent holders (including those in telecommunications) against unauthorized use, disclosure, or copying.

(For a more detailed discussion of laws which affect overall FIP resource acquisition, see Chapter 1, “Statutes That Apply to the Acquisition of FIP Resources.”)

Additional Statutes Affecting Telecommunications Acquisition

In addition to these laws affecting telecommunications which you already learned about in Chapter 1, you should also know about several other laws which can affect the acquisition of telecommunications. These include:

- the Service Contract Act of 1965 (41 U.S.C. 351-358) which concerns contractor employees working on Government contracts. This Act covers the minimum wages, fringe benefits, notification to employees of minimum allowable compensation, and safe and sanitary working conditions. This Act also limits certain service contracts, to a period of five years or less.
 - the Telecommunications Accessibility Act of 1988 (P.L. 100-542), which required that Federal agencies make certain that the Federal telecommunications system is fully accessible to hearing-impaired and speech-impaired Federal employees and other workers, for communications within Federal agencies. Note that this is largely done through the use of a device called the standard Telecommunications Device for the Deaf (TDD).
-

13.1 Regulations and Policies That Impact on Acquisition of Telecommunications Resources *(continued)*

Regulations and Policies

You will recall from Chapter 2 that there are also OMB Circulars that uniquely apply to, or have an unusual impact on, the acquisition of FIP resources (including telecommunications). Briefly, the most important of these OMB Circulars include:

- A-76, *Policies for Acquiring Commercial or Industrial Products and Services Needed by the Government*, which discusses policies and procedures for “outsourcing” (determining whether functions should be performed by outside contractors, or by Government employees).
- A-109, *Major System Acquisitions*, which describes policies you should follow when acquiring major systems. It requires agencies to express needs in mission and functional terms; interact with Congress; establish clear lines of responsibility, authority and accountability; and allow for competition through multiple awards.
- A-130, *Management of Federal Information Resources*, which consolidates the policy for the management of FIP resources in the executive Federal agencies. Recall that A-130 discusses responsibilities for maintaining records about individuals; cost accounting, cost recovery, and interagency sharing of FIP resources; and security of automated information systems.

(For a more detailed discussion of the OMB Circulars, see Chapter 2, “OMB Circulars That Apply to Acquisition of FIP Resources.”)

Impact of the FAR on Telecommunications

Certain parts of the FAR also have some special impact on the acquisition of telecommunications, especially FAR Parts 7, 10, and 39.

- FAR Part 7 concerns acquisition planning, and includes guidance on equipment lease or purchase (FAR Subpart 7.4). It discusses general procedures, economic quantities, contractor versus Government performance, and equipment lease or purchase. *The lease or purchase guidance is of particular interest, since many telecommunications resources will be leased, rather than purchased.*

(Topic continued on next page)

13.1 Regulations and Policies That Impact on Acquisition of Telecommunications Resources *(continued)*

Impact of the FAR on Telecommunications
(continued)

- FAR Part 10 discusses specifications, standards and other purchase descriptions. It includes definitions, policy, responsibilities, selecting specifications or descriptions for use, management of purchase descriptions, deviations, acquiring used or reconditioned material and solicitation provisions and contract clauses. Much of this guidance applies directly to the acquisition of telecommunications.
- FAR Part 39 briefly addresses the acquisition of information resources, but refers you to the FIRMR, especially FIRMR Part 201-23 (on disposition of FIP equipment), as a primary source of policy.

FIRMR Guidance on Telecommunications

In turn, the FIRMR is the greatest source of guidance concerning the acquisition of telecommunications. You should be especially aware of the following FIRMR references and their contents:

FIRMR 201-4.001	Provides <i>key definitions</i> about telecommunications, including telecommunications resources, telecommunications services, telecommunications switching function, television equipment, toll-free telephone service and telecommunications device for the deaf (TDD).
FIRMR 201-20.103-7	Discusses <i>accessibility requirements</i> for individuals with disabilities. It requires that you provide telecommunications access to hearing and speech-impaired individuals, including education and training on the GSA relay service, TDD-related devices, and refers you to FIRMR Bulletins C-8 and C-10.
FIRMR 201-20.303 (Standards)	Prescribes policies and procedures for FIP Standards (FIPS) and Federal Telecommunications Standards (FED-STDs). It also refers you to the GSA's " <i>Federal ADP and Telecommunications Standards Index</i> " the official standards for telecommunications developed for the National Telecommunications System. You must be aware of these standards for any telecommunications solicitation.
FIRMR 201-20.305-1 (Regulatory delegations)	Discusses regulatory delegations to agencies, including those for telecommunications, within the scope of FTS2000 services and GSA's Consolidated Local Telecommunications Services Program.

(Topic continued on next page)

13.1 Regulations and Policies That Impact on Acquisition of Telecommunications Resources *(continued)*

FIRMR Guidance
on Telecommuni-
cations
(continued)

FIRMR 201-20.306	Discusses the delegation of GSA's multiyear contracting authority for telecommunications services. It authorizes agencies to enter into multiyear contracts for telecommunications resources under certain conditions.
FIRMR 201-21.6	Discusses use of Government telephone systems, including use of long distance telephone services, collection for unauthorized use, listening -in or recording telephone conversations and toll-free telephone service.
FIRMR 201-24.1	Discusses GSA mandatory-for-use programs, including the mandatory FTS2000 telecommunications network, consolidated local telecommunications service.
FIRMR 201-24.2	Discusses GSA mandatory-for-consideration programs, including telecommunications assistance programs and services, and the Federal Secure Telephone Service (FSTS) and Information systems security (INFOSEC).
FIRMR 201-39.8	Discusses required sources of supplies and services, including nonmandatory FIP schedules.
FIRMR 201-39.1002-1	Mentions the GSA handbook "Federal ADP and Telecommunications Standards Index" as a source of guidance on Federal standards, and the use of the "Standards Checklist" to incorporate standards into a solicitation. (See Chapter 16 for a further discussion on standards in FIP resource acquisitions.)
FIRMR 201-39.1002-4	(Solicitation provision) advises that, if any of the terminology you use to incorporate standards (including telecommunications standards) is incorporated by reference, you should insert in the solicitation the provisions of § 201-39.5202-2, "Availability of the Federal ADP and Telecommunication Standards Index."

13.1 Regulations and Policies That Impact on Acquisition of Telecommunications Resources *(continued)*

FIRMR Bulletins

In addition, you should be aware of the several FIRMR Bulletins which provide detailed guidance to implement the intent of the FIRMR and various policies concerning telecommunications. Of course, you will probably not need all of these in a given telecommunications buy, but you *should check these FIRMR bulletins before initiating the telecommunications acquisition.* These bulletins include:

A-1	Which discusses implementation of the Paperwork Reduction Reauthorization Act of 1986.
C-1	Which provides information and guidance on the sharing of local telecommunications resources. <i>Note that this may be an alternative to acquiring additional telecommunications resources.</i>
C-3	Which discusses the “ <i>Federal ADP and Telecommunications Standards Index</i> ,” a major reference for standards in any telecommunications acquisition.
C-5	Which discusses delegation of procurement authority for acquisitions (including telecommunications).
C-6	Which discusses review responsibilities under the Federal Information Resources Management Review Program, including reviews for telecommunications.
C-8	Which discusses information accessibility for employees with disabilities. It also refers you to the GSA Handbook, “ <i>Managing End User Computing for Users with Disabilities</i> .”
C-9	Which concerns nonmandatory GSA services and assistance programs, including purchase of telecommunications services contracts, and telecommunications support contracts. It explains that GSA can provide technical assistance in developing SOWs for telecommunications support contracts.
C-10	Which discusses telecommunications accessibility for hearing and speech-impaired individuals. This includes explanation of the Federal Information Relay Service (FIRS), to allow individuals with speech and hearing impairments to communicate with and within the Federal Government, and the Federal TDD directory, which provides a single source where access numbers can be found on Telecommunications Devices for the Deaf (TDD) and TDD-related equipment for Federal agencies.

13.1 Regulations and Policies That Impact on Acquisition of Telecommunications Resources *(continued)*

FIRMR Bulletins
(continued)

C-11	Which discusses the sharing of ADP resources, including GSA's ADP Sharing Program, OMB sharing requirements, provider agency responsibilities, user agency responsibilities, and locations of potential sources for sharing.
C-13	Which discusses management of long distance telephone services, including FTS2000 information for Networks "A" and "B," agency responsibilities, GSA responsibilities, and examples of calls necessary in the interest of the Government.
C-15	Which discusses mandatory local telecommunications service, including definitions, acronyms, description of service, mandatory service, exceptions, customer premise equipment, ordering, billing, cancellation, locations for designating local service locations operated by GSA, termination charges, and information and assistance.
C-16	Which discusses emergency telecommunications, including non-wartime emergencies, telecommunications in wartime, agency responsibility, cancellation, and GSA branch offices that provide emergency telecommunications assistance.
C-18	Which provides detailed information on the Federal Telecommunications System 2000 (FTS2000) operated by AT&T and Sprint and managed by GSA. It explains FTS2000 services and features, assignment of agencies to networks, mandatory use of FTS2000 services, exceptions, agency support, ordering of services, emergency calling alternatives to FTS2000, and National Security and Emergency Preparedness Services. <i>Note that, although the FTS2000 system is also mentioned in other references, this is the basic reference you must use in regard to FTS2000 services.</i>
C-19	Which concerns information system security (INFOSEC), including information and assistance, definitions, TEMPEST, acquisition of equipment and services, National Security Agency (NSA) certification, interagency agreements, and special support services available. <i>(Note that this is one of the critical references if your telecommunications acquisition contains security requirements.)</i>

(Topic continued on next page)

13.1 Regulations and Policies That Impact on Acquisition of Telecommunications Resources *(continued)*

FIRMR Bulletins (continued)

C-20	Which discusses national security and emergency preparedness (NSEP) telecommunications, including guidance to Federal agencies on how GSA implements its telecommunications responsibilities. Note that this is also an important reference if your telecommunications acquisition includes security requirements.
C-21	Which concerns purchase telecommunication service (POTS) contracts. It provides guidance on purchase, installation, maintenance, repair, removal, and relocation of new and used telephone equipment.
C-22	Which explains security and privacy protection of FIP resources, including telecommunications and those resources provided by contractors. <i>(Note that this is another critical reference for virtually all telecommunications buys.)</i>
C-23	Which concerns limitations on the use of halon fire suppressant in telecommunications facilities.
C-34	For guidance on video teleconferencing and FIP audiovisual and telecommunications resources. (This is a critical reference, because the field of teleconferencing is one of the fastest growing areas in telecommunications.)

FTS2000 Policy

Probably the most common area of telecommunications acquisition in which you may become involved is requests for telephone services. The FIRMR provides a large amount of policy guidance on acquisition of telephone services, including the mandatory use of such services as local service and long distance. FIRMR 201-24.101 requires the use of FTS2000 network services by Federal agencies (with certain exceptions). FIRMR Bulletin C-18 explains the mandatory FTS2000 contract services.

Assignment of Agencies to Networks

One feature of the FTS2000 service contract is the assignment of agencies to certain designated networks. Before you initiate a request for telephone services, you should also check Attachment C to FIRMR Bulletin C-18 for a listing of the organizations assigned to each network.

13.1 Regulations and Policies That Impact on Acquisition of Telecommunications Resources *(continued)*

Policy for Long
Distance Services

If you are acquiring telephone long distance services, you should be aware that “an *agency must request and obtain approval from the GSA office of FTS2000 to acquire long distance services other than those available on the FTS2000 network,*” (unless it can demonstrate that the agency’s requirements are unique and cannot be satisfied by the FTS2000 network).

(Note - Chapter 14, “Acquiring Telecommunications,” discusses in greater detail the various types of telecommunications you may acquire.)

13.2 Rulings Applicable to FIP Resources and the Telecommunications Industry

Impact of Rulings In addition to the FIRMR and FAR regulations already discussed, there are several rulings which have impact on a telecommunications resources acquisition. These include:

- Federal Communications Commission (FCC) rulings;
 - Tariffs;
 - the Carterfone decision;
 - Modified final judgment
 - Computer Inquiry II
-

FCC Rulings The FCC is the Federal agency responsible for regulation of the telecommunications spectrum. This includes assignment and monitoring of all civilian signal frequencies to ensure that the available electromagnetic spectrum is used in accordance with laws, regulations and the public interest. The National Telecommunications and Information Administration assigns frequencies for Federal agencies.

As a regulatory agency, the FCC establishes policy through regulations and *rulings* which can have major impact on the acquisition and use of telecommunications.

One way that FCC policy affects telecommunications acquisitions is through the use of regulations and standards. All manufacturers of telecommunications equipment must comply with well known FCC manufacturing and operating standards. For example, every manufacturer must certify that telephones and other telecommunications equipment do not interfere with the operation of telecommunications by other parties.

The other way that the FCC has a major impact on telecommunications is through *rulings*. For example, in response to demands from the public and telecommunications companies, the FCC has reserved a part of the 40 megahertz radio spectrum for the use of Personal Communications Services (PCS). This will permit users of personal digital assistants, such as the Tandy Zoomer® or Apple Newton® to transmit data as a radio signal, without licensing, and without paying carrier and service charges.

13.2 Rulings Applicable to FIP Resources and the Telecommunications Industry *(continued)*

Effect of FCC Rulings on Competition

There are some key FCC rulings concerning telecommunications that you should understand. Until recently, telecommunications in the U.S. was very highly regulated, but recent FCC and court rulings, have greatly reduced the overall regulation of telecommunications services. ***This has greatly increased the level of competition and innovation in telecommunications.***

Summary of Key FCC Rulings

There have been a large number of FCC rulings (and court cases) that affect the acquisition of telecommunications. Several of the most important, including the Carterfone ruling, and Modified Final Judgment, are discussed in more detail later in this section.

However, you should understand that the **summary impact** of these FCC rulings is:

1. In the United States, all communications facilities are regulated by the Federal Government. The agency responsible is the Federal Communications Commission, followed by state regulations. *Any organization that wishes to offer common carrier services must submit a tariff to the FCC.* A tariff is a list of services and rates to be charged for those services.
2. One of the results of deregulation and divestiture of Bell Operating Companies is the creation of the *value added network (VAN)*. A value added network carrier leases communications circuits from a common carrier. The line quality is then enhanced to reduce errors and provide faster response time. This is then repackaged and resold as a separate commodity.
3. In 1972, communications companies were authorized to launch their own satellites, creating another market niche for communications companies to compete.

Because of these FCC rulings, deregulation and divestiture, *there is now great competition* in data service, long distance service, satellite service and equipment manufacturing within the telecommunications environment.

13.2 Rulings Applicable to FIP Resources and the Telecommunications Industry *(continued)*

Tariffs

A very important way in which the FCC affects the use and acquisition of telecommunications is through the setting of tariffs. Communications vendors must submit tariffs which they propose to charge to customers for approval by the FCC (and state public utilities commissions). In many cases, vendors of telecommunications services must charge only a rate that is already established for those services and are therefore not free to offer a different rate to customers.

So, if you are entering into a telecommunications services contract, one of the things that you must know is the prevailing tariff for that type of service which has been established by the FCC.

Periodically, the FCC (and the various state public utilities commissions) will review established tariffs to determine if they should be changed. You should be aware of any pending changes in rates if you are planning to acquire telecommunications services, and take the planned rates into account in your cost considerations.

Specific Rulings

You are not expected to be a legal expert on telecommunications, but you should at least know about three important rulings:

- Computer Inquiry II;
 - the Carterfone decision; and
 - Modified Final Judgment.
-

Computer Inquiry II

This case affected the ability of the telephone company to control the sale and use of terminals and other such “foreign” (non telephone company-owned) equipment. Briefly, as a result of the Computer Inquiry II and similar related rulings, the telephone company lost a degree of control over what terminals and other devices could be sold, purchased by users, and be attached to telephone outlets by the users.

As a result of this and similar rulings, the user now has considerable leeway over the attachment of computer terminals and other devices to telephone outlets in the home or office without requiring the approval of the telephone company.

13.2 Rulings Applicable to FIP Resources and the Telecommunications Industry *(continued)*

Carterfone Decision

You should also know about the *Carterfone decision* because of its impact on the acquisition of telecommunications. The Carterfone decision (and several related rulings by the FCC and courts) paved the way for the sweeping *deregulation of telecommunications (especially telephone services) and the increase in competition*.

The Carterfone was a device designed to be connected via two way radio at a base station serving a mobile radio station. When callers on the radio and telephone are both in contact with a base station, the operator's telephone hand set is placed in a Carterfone cradle. The Carterfone contained a voice control circuit which automatically switched on a radio transmitter (voice activated). When the telephone caller stopped speaking, the radio returned to a "receive" mode.

The American Telephone and Telegraph Company sued to stop use of the Carterfone on the grounds that there was a prohibition against telephone users attaching a "foreign" (non-phone company) device to phone company equipment. AT&T argued that since telephone companies were responsible to establish, operate and improve telephone systems, they must have *absolute* control over quality, installation, and maintenance of all system parts.

The FCC ruled that the use of a Carterfone to connect telephone landlines with mobile radio systems had no adverse effect on telephone use. Therefore, it became legal to connect devices manufactured and controlled by other than telephone companies ("foreign devices") for use with phone company equipment.

As a result of the Carterfone decision (and related rulings), many inventors, manufacturers and vendors became encouraged to develop and market various telecommunications devices, such as facsimile and other devices, which no longer required approval by the telephone company for connection. Again, this greatly increased competition.

13.2 Rulings Applicable to FIP Resources and the Telecommunications Industry *(continued)*

Modified Final Judgment (MFJ)

Another landmark decision affecting acquisition of modern telecommunications which you should know is the Modified Final Judgment by D.C. Circuit Court Judge Harold Greene. This ruling was so important because it broke the long standing near monopoly of AT&T.

This case concerned Videotex, an early cable information service company. Videotex offered a variety of tailored services based on two telecommunications technologies, “electronic publishing” (text concerning any subject, received on a computer screen by the user) and “electronic fund transfers” (authorizing money credits or debits to a bank account by computer). Both of these technologies delivered the final product (computer data) to the user via the lines owned and operated by the phone company (then a local monopoly) to the home or office.

In order to encourage competition, the MFJ required AT&T to divest itself of its local operating monopolies, in order to remove incentives for AT&T to discriminate against customers seeking the benefits of competitive interexchange service, and barred AT&T from providing information services (such as Videotex) over its own transmission lines for seven years after divestiture.

This decision has made possible an almost infinite variety of new telecommunications services, with a great increase in competition and many new sources and vendors.

Getting Assistance on Guidance for Telecommunications

You can see that there is a great deal of guidance available on the topic of telecommunications policy. It is easy to become confused, but you should also know that help is available.

If you have to acquire telecommunications resources, first review all the references discussed in this chapter. This will give you a basic understanding of the available guidance.

After reviewing these documents, if you have any questions, contact the sources of assistance. These include the various GSA information resources management services located at the zone, regional, and area office levels. You can find the telephone number for the GSA source of assistance nearest you in Appendix C of the GSA’s “*A Guide for Acquiring Telecommunications Equipment and Services.*”

13.2 Rulings Applicable to FIP Resources and the Telecommunications Industry *(continued)*

Key Points You Must Remember About Acquiring Telecommunications:

You can see from this chapter that there are certain key points you must remember about acquiring telecommunications:

1. Telecommunication resources are a part of overall FIP resources, but require some special considerations, because of their unique nature. These considerations will depend on the agency's special requirements, the analysis of alternatives, and existing telecommunications programs.
 2. The laws, regulations and policies that apply to other FIP resources also apply to telecommunications resources; in addition there is extensive guidance in the FIRMR, especially in FIRMR bulletins, in standards developed by NIST and the GSA's "*A Guide for Acquiring Telecommunications Equipment and Services.*"
 3. There are certain mandatory-for-use and mandatory-for consideration programs managed by GSA that you must consider, including FTS2000, and FSTS.
 4. Finally, you should make use of the sources of assistance for telecommunications, especially GSA sources in the zone, regional and area offices.
-

SUMMARY

In this chapter, you learned about the statutes, OMB Circulars, and other regulatory requirements which apply to or have impact on acquisitions of telecommunications. In the next chapter, you will learn how to distinguish among and choose the appropriate method of acquisition available for acquiring telecommunications.

CHAPTER 14

ACQUIRING TELECOMMUNICATIONS

Chapter Vignette

“Keep in mind,” said Marcia, “that when we talk of FIP resources, most people think of equipment to be installed and operated at one location only. The thing about telecommunications is that it covers a very wide area, and is subject to both federal and international regulations. Technology is advancing very rapidly in this area and the types of services that are becoming available are almost beyond our ability to understand them and to keep pace.”

“The telecommunications net is largely in place and invisible to most of us, so we just take it for granted when we use the various services available, but procuring those services and incorporating them into a FIP acquisition is no small task. I suppose we should begin with a good look at the various types of telecommunications services available.”

Course Learning Objectives

At the end of this chapter, you will be able to:

Overall:

Distinguish among and choose the appropriate method of acquisition available for acquiring telecommunications.

Individual:

- 14.1 Explain Terminology Necessary for Acquiring Telecommunications.
- 14.2 Distinguish between voice and data transmission.
- 14.3 Distinguish between local area networks (LAN) and wide area networks (WAN).
- 14.4 Explain types of lines.
- 14.5 Choose the special characteristics of a telecommunications requirement.
- 14.6 Identify the role of standards in the telecommunications area.
- 14.7 Identify telecommunications sources provided by GSA and other than by GSA.
- 14.8 Distinguish the differences in the approval process for the acquisition of all types of telecommunications services.

Chapter Overview

Scope

This chapter explains how you can distinguish among the various methods of acquisition available for acquiring telecommunications and how to choose the appropriate method. You will learn that it is possible to meet many requirements with programs that are mandatory-for-use or mandatory-for-consideration.

It will identify items associated with telecommunications, including voice transmission, data transmission, local area networks (LAN) and wide area networks (WAN) and explains how to choose the special characteristics of a telecommunications requirement and the types of lines.

It also identifies the role of standards in the telecommunications area, such as GOSIP and POSIX, and identifies telecommunications sources provided by the GSA and by other than the GSA.

Finally, it distinguishes the differences in the approval process for the acquisition of all types of telecommunications services.

References

You may need to refer to the following references in order to fully understand some parts of this chapter:

- FIRM Bulletins, especially A-2, C-3, C-13, C-15, C-18, and C-19
 - FIRM 201-24.101, 201-20.303, 201-20.305, 201-39.1002, 201-39.802(b)
 - GSA's "*A Guide for Acquiring Telecommunications Equipment and Services*"
-

Chapter Overview *(continued)*

Topics Covered in
this Chapter

This chapter includes the following topics:

SECTION	TITLE	PAGE
14.1	Terminology Necessary for Acquiring Telecommunications	14-5
14.2	How to Distinguish between Voice and Data Transmission	14-8
14.3	How to Distinguish between Local Area Networks (LAN) and Wide Area Networks (WAN)	14-9
14.4	Types of Lines	14-10
14.5	Choose the Special Characteristics of a Telecommunications Requirement	14-12
14.6	The Role of Standards in the Telecommunications Area	14-21
14.7	Telecommunications Sources Provided by GSA and Other Than by GSA	14-25
14.8	How to Distinguish the Differences in the Approval Process for the Acquisition of All Types of Telecommunications Services	14-30

14.1 Terminology Necessary for Acquiring Telecommunications

Telecommuni- cations Definitions

In order to understand the requirements in this chapter, you should be familiar with the definitions concerning telecommunications acquisition. These definitions provide for a common understanding of telecommunications terms by you, the contractors, and the various agencies. Other terms are discussed in Sections 3.2, 3.3, and 3.4.

Call Detail Report	In accordance with FIRMR Bulletin C-13, this means a record of long distance telephone calls showing the originating number; destination number; city and state; date and time of day the call was made; and the duration of the call. (Note that the Call Detail Report can provide a valuable tool to track the use or abuse of telephone service, but is subject to some restrictions.)
Central Office of Record (COR)	In accordance with FIRMR Bulletin C-19, this means a central office within an agency or organization that maintains and safeguards records of accountable communications security (COMSEC) materials received or created by Government organizations subject to COR oversight.
Communications Security (COMSEC)	In accordance with FIRMR Bulletin C-19, this means communications security systems, services and concepts that constitute protective measures taken to deny unauthorized persons information derived from telecommunications of the United States Government related to national security and to ensure the authenticity of any such communications.
Common Distributable Charge	In accordance with FIRMR Bulletin C-15, this means a charge that GSA adds to the cost of each agency line served by a GSA-provided local service entity to recover management and overhead costs. This charge comprises those costs applicable to the particular local service entity as a whole and are not identified to any particular line or agency.
Consolidated Local Telecommunications Service	In accordance with FIRMR Bulletin C-15, this means local communications service provided by GSA to all Federal agencies located in a building, complex, or geographical area.
Cut-over	Means the physical changing of lines from one telephone system to another, or the installation of a new system. According to Newton's Telephone Dictionary, there are two types of cutovers, flash and parallel. A flash cut-over occurs when the existing telephone traffic is completely changed from the "old" to the "new" system all at once (usually over a weekend when there is no office telephone traffic.) A parallel cut-over occurs when the old system is left in operation and the new one is installed around it. (For a time there are two systems operating.) (Note that one key factor you must consider in acquiring telecommunications is the requirement for a cut-over period.)
Federal Security Telephone Service (FSTS)	In accordance with FIRMR Bulletin C-19, FSTS is a worldwide secure voice service designed to protect sensitive and classified voice transmissions.

(Table continued on next page)

14.1 Terminology Necessary for Acquiring Telecommunications *(continued)*

Federal Telecommunications Standards (FED-STDS)	<p>FIRMR 201-20.303 defines these as official Government publications relating to standards developed by the National Communications System under delegation from GSA. FED-STDS include those categories in the Federal Supply Class (FSC) for “Telecommunications” of the Federal Standards Program as redefined as Automatic Data Processing Equipment by Public Law 99-500.</p> <p>(Note that in researching standards for a telecommunications acquisition, you should refer program office or agency technical personnel to these standards as a basic reference for developing the acquisition plan and include reference to these standards, as appropriate, in the solicitation.)</p>
Federal Telecommunications System (FTS)	<p>FIRMR 201-4.001 defines this as the umbrella for local and long distance telecommunications services, including FTS2000 long distance services, provided, operated, managed, or maintained by GSA for the common use of all Federal agencies and other authorized users.</p> <p>(Note - FTS2000 is the largest and best known of these and is discussed in detail elsewhere in this chapter.)</p>
Government-Furnished Services	<p>According to FIRMR Bulletin C-18, means those services directly acquired by the Government and subsequently made available to a contractor.</p>
Information Accessibility	<p>FIRMR Bulletin C-10 identifies this as the application or configuration of FIP resources in a manner that accommodates the functional limitations of individuals with disabilities so as to promote productivity and provide access to work-related or public information resources.</p> <p>An example in telecommunications would be the use of Telecommunications Devices for the Deaf (TDDs) or special headphones to provide louder signals.</p>
Information System Security (INFOSEC)	<p>According to FIRMR Bulletin C-19, means a composite of factors necessary to protect FIP systems and the information they process to prevent exploitation through interception, unauthorized electronic access, or related technical intelligence threats, and to ensure authenticity. This protection results from the application of security measures; including cryptosecurity, transmission security, emission security, and computer security, to systems that generate, store, process, transfer, or communicate information of use to an adversary, and also includes the physical protection of sensitive material and sensitive technical security.</p> <p>(Note - for a more complete discussion of security issues, see Chapter 19, “Computer Security for FIP Resources Acquisitions.”)</p>
Intercity	<p>According to FIRMR Bulletin C-18, as it applies to FTS2000, means a telecommunications transmission between two or more locations that cannot be accomplished within a local service area. “Intercity” and “long distance” mean the same thing.</p>
Inherently Long Distance Feature	<p>Defined by FIRMR Bulletin C-18 as a feature that can be provided only as part of or by a long distance network.</p>

(Table continued on next page)

14.1 Terminology Necessary for Acquiring Telecommunications *(continued)*

Local Network	Defined by FIRMR Bulletin C-18, as locations within a local service area, interconnected by communications circuits.
Long Distance Telephone Service	FIRMR 201-4.001 defines this as any service or facility purchased with Government funds for completing telephone calls outside of the local service area.
Local Service Area	Defined by FIRMR Bulletin C-18, as service within a 25 mile radius, within a Local Access and Transport Area (LATA), or within a metropolitan area.
Non-inherently Long Distance Features	Those features that can be provided without the use of a long distance network (FIRMR Bulletin C-18).
Point of Connection	A location within a building where an agency's wire or cable connects to the consolidated system's facilities. Most office buildings have several such points on each floor or hallway.
Single Server Concept	A concept under which either GSA or another agency is responsible for providing service to all agencies at a location (FIRMR Bulletin C-15). For example, GSA may provide all telephone services in a building occupied by several Federal agencies.
Switching Function	Any switching equipment or switching arrangement used to connect agency Customer Premise Equipment (CPE) phone exchange to telephone company equipment that would permit or cause a line to function as a trunk. Only GSA will provide this type of a switching function at a consolidated location.
Telecommunications Resources	Telecommunications equipment, facilities and services (FIRMR 201-4.001).
Telecommunications Services	The transmission, emission, or reception of signals, signs, writing, images, sounds, or intelligence of any nature, by wire, cable, satellite, fiber optics, laser, radio, or any other electronic, electric, electromagnetic, or acoustically coupled means. The term includes the telecommunications facilities necessary to provide such services (FIRMR 201-4.001).
Telecommunications Switching Function	Any service or equipment that has a primary function to switch telephone calls at a location. This term excludes service or equipment necessary to meet agency requirements that cannot be met by an existing switching function.
Termination Charges	Those charges that GSA and other agencies will incur when an agency leaves a GSA consolidated service location. The agency leaving a GSA consolidated location is responsible for its appropriate share of the termination liability.
Toll-free Telephone Service	According to FIRMR 201-4.001, means any incoming circuit arrangement that allows the public to make long distance telephone calls to authorized locations at Government expense. Toll-free telephone service is used for providing or obtaining information concerning Government programs, such as social welfare, disaster aid, veterans' affairs, and income tax assistance.

14.2 How to Distinguish Between Voice and Data Transmission

Differences Between Voice and Data Transmissions

This section discusses how you can distinguish between voice and data transmissions. Although we often think of telecommunications primarily as voice telephone service, a huge and increasing amount of telecommunications traffic is the transmission of data, often between computers, without human involvement. Voice transmission must be “slow” enough to be understood by a human receiver. Data transmission can be extremely fast (in human terms) because it does not have to be heard by a human. Usually, an agency requirement will specify that it needs BOTH voice and data transmission.

Voice Transmission

Voice Transmission is any transmission of information using the human voice over telecommunications media. We commonly think of the telephone lines or radio for voice transmission, but the voice transmission may also be relayed by satellite, microwave antennas, or buried fiber optic cables. During transmission, the human voice may be transmitted “as is” or encoded, compressed or otherwise altered so that it cannot be recognized without special equipment.

The present amount of voice transmission is more than 50% of the total transmission traffic, but even though the total amount of voice transmission is growing, the percentage is falling as data transmission grows more rapidly.

Data Transmission

Data Transmission, in the broad sense, is the transmission of data relying on a medium other than the human voice. The most common example is facsimile (FAX) transmission, now found in nearly every office. But, increasingly, this will be electronic communication between computers which can exchange information around the clock with little or no human involvement. Data transmission is growing faster than voice transmission

Electronic Data Interchange

For example, an increasing number of contractors and offerors are adopting Electronic Data Interchange (EDI) to obtain information on Government contracts and solicitations through computer-to-computer linkups, without requesting bulky paper solicitations. Some estimate that by the year 2000 the great majority of private sector firms will request, receive and exchange solicitation data solely by computer-to-computer exchanges over telecommunications with Government contracting offices.

14.3. How to Distinguish Between Local Area Networks (LAN) and Wide Area Networks (WAN)

Difference
Between LAN and
WAN

This section explains how you can distinguish between a local area network (LAN) and a wide area network (WAN).

A LAN is a private data communications network, usually within a single office or building, that connects a number of microcomputers. The LAN permits users to share software applications and data with other users on that LAN. For example, a word processing program can be loaded on just one computer (called a server) which then permits all users on the LAN to access and use that program, or to look up and modify files (such as reports) that have been prepared by other users.

A WAN is a data communications network, covering a larger geographic area, in which the communications is carried, at least part of the way, between locations by telephone lines. For example, an agency may have a number of offices throughout several states connected by a WAN. A WAN may have many of the same features as a LAN, such as ability to share files, but the transmissions leave the originating office and travel (usually over commercial telephone lines) to the receiving office. Since the traffic is often carried between cities, it is subject to higher costs.

14.4. Types of Lines

Types of Lines

This section explains the types of telecommunications lines that are available to support a requirement. In the broad sense, a line (sometimes called a “loop”) is the connection between a customer’s station and a switching system. Remember, the design, establishment and operation of these lines are all subject to *standards*. The traffic over these lines are subject to *tariffs*.

Lines vs. Wiring

DO NOT CONFUSE THESE LINES WITH THE WIRING INSIDE THE USER’S BUILDING. Although users often speak of the two as if they are the same, they are not. The use of the lines is usually leased by the Government to connect to a telecommunications switch owned and operated by the telecommunications company. Most of the lines are outside the building. “Wiring” in a Government office is inside the building and is considered to be a part of that building.

Depending on the nature of the requirement, you may acquire service over lines which are:

- local;
 - long haul;
 - dedicated (voice, data, or combination); or
 - multiple use (voice, data, or combination).
-

Local Lines

The local lines are those which connect the user’s equipment (such as a telephone) to the nearest system switch. The telecommunications signals enter and depart the user’s equipment over these local lines. These are often called “access lines,” or “loops,” and include those parts of the telephone line system which are most visible to the user.

Long Haul Lines

Long haul lines are those which carry telecommunications traffic over the “trunk” of the telecommunications system, usually for long distance or “intercity” communications. Traffic over these lines usually costs more (is subject to a higher tariff).

14.4. Types of Lines *(continued)*

Dedicated Lines

Often called “Dedicated Access Lines” (DAL) are those lines which connect the user’s device directly with the telecommunications company switch, with no intermediate connections to any other switches. Note that these are usually obtained only by special arrangement, because dedicated lines are not used by other users. Dedicated lines may be requested for special transmission requirements for voice, data, or a combination. Dedicated lines may require special installation and will cost more.

Multiple Use Lines

Unlike the dedicated lines, multiple use lines allow many users to share access from their devices to the telecommunications company switch. Unless dedicated lines have been requested, the user will normally be assigned to a multiple use line. These can also carry voice, data, or a combination of traffic.

14.5 Choose the Special Characteristics of a Telecommunications Requirement

Special Characteristics of a Telecommunications Requirement

This section discusses how you should choose the special characteristics that you will need in a telecommunications requirement. The method of acquisition will depend largely on special characteristics of the proposed telecommunications acquisition. You will find that, for many telecommunications requirements, there are already mandatory-for-use contracts and sources that should be used, unless the requiring agency or program office can demonstrate special characteristics that require an unusual acquisition.

Usually, the reasons for NOT using mandatory-for-use contracts must be justified by the requiring agency and will depend on the results of the requirements analysis and special characteristics such as one or more of the following:

- Bandwidth;
 - Main station capacity;
 - Amount of communications traffic;
 - Growth expected;
 - Reliability desired;
 - Availability desired;
 - Grade of service;
 - Access;
 - Control;
 - Security and privacy;
 - Emergency preparedness;
 - Requirements for interoperation;
 - Documentation;
 - Training requirements;
 - Cutover plan;
 - Acceptance criteria;
 - Maintenance requirements; and
 - Technology refreshment.
-

14.5 Choose the Special Characteristics of a Telecommunications Requirement *(continued)*

Importance of the Requirements Analysis

You can see that these are technical characteristics which will require the judgment of results of telecommunications and program specialists during the *requirements analysis*, which occurs in the planning phase of the acquisition life cycle.

The Contract Specialist's Role in the Requirements Analysis

As a contract specialist or contracting officer, you will probably not be directly involved in the technical decisions that lead to the writing of the Acquisition Plan, but you may be required to coordinate with, and provide advice to, the technical members of the planning staff during the requirements analysis.

For example, you might guide them to appropriate references, such as the FIRMR, Bulletins, FED-STDS, "*A Guide for Acquiring Telecommunications Equipment and Services*," published by the Information Resources Management Service of GSA, and inform them of existing telecommunications resources and support available through existing programs, such as GSA's Telecommunications Support Contract and or Direct Assistance Program.

In addition, you will probably become involved in the planning phase either performing or assisting in such tasks as:

1. Explaining statutes, OMB Circulars, policies, rulings, standards and references that apply to the acquisition of telecommunications resources;
2. Assisting or guiding market research, including explanation of available telecommunications programs and resources managed by other agencies, such as GSA's FTS2000;
3. Reviewing standards, specifications and SOW proposed for the telecommunications acquisition to determine if they appear appropriate;
4. Determining the scope of competition;
5. Determining available funding and financing, and performing present value analyses and lease vs. purchase analyses, and
6. Reviewing the requirements analysis to be sure that it is complete, not ambiguous, and not overly restrictive to limit competition. ***This is critical*** because you may later wish to incorporate much of the information in the requirements analysis into other key documents for which you will be responsible, including the Source Selection Plan and the solicitation.

(Topic continued on next page)

14.5 Choose the Special Characteristics of a Telecommunications Requirement *(continued)*

The Contract
Specialist in the
Requirements
Analysis
(continued)

If you have concerns or doubts about the completeness of the requirements analysis for a telecommunications acquisition, be sure to consult with the program staff, telecommunications experts and contractors or consultants who performed the requirements analysis. Document and be specific about your concerns.

For example, you might wish to express your concern about whether they adequately considered such factors and questions as those stated in the GSA's "*Guide for Acquiring Telecommunications and Services.*" Of course, you might not be concerned about all of the following in any given requirements analysis, but these are typical of the kinds of questions or concerns you might raise:

- A requirements survey. Was a requirements survey performed in order to define the present (installed) telecommunications system and explain why it is not sufficient?
 - Identification of the agency (or program) mission and functions. Are these properly identified? If not, it will be harder to understand why a new telecommunications resource is needed. The requirements analysis should explain how and why the telecommunications acquisition is required to support the mission and functions.
 - Agreement with the long range IRM plan. Does the telecommunications acquisition agree with the agency's long range (updated) IRM plan, as required by the FIRMR?
 - Explanation of special characteristics and requirements. Does the requirements analysis explain the special telecommunications requirements such as geographic location or siting within the agency, combination or separation of voice and data, telecommunications workload, backlogs, special directory or communications requirements, security (INFOSEC or COMSEC), traffic, growth, in-house management, reliability, availability, access, off-premise extensions, control, emergency preparedness, interoperation, training, cutovers, technology refreshment, or other such special characteristics or requirements?
-

14.5 Choose the Special Characteristics of a Telecommunications Requirement *(continued)*

Request for Information

If the telecommunications acquisition will be large and complex, you may wish to issue a Request for Information (RFI) to obtain information from potential offerors as to whether there are available cost-effective technical solutions to the agency requirements. If you do this, allow for sufficient time to review responses.

Checking Special Characteristics Against Available Resources

Once you are satisfied that the requirements analysis presents the necessary information that you will need on the special characteristics and requirements, you will be ready to check these against available programs. Although the special characteristics and requirements will vary among acquisitions, you will probably have to consider *at least* the four following characteristics in most telecommunications acquisitions:

1. Cutover plan
2. Termination liability;
3. Contract term; and
4. Lease vs. purchase decision.

Cutover Plan

The first characteristic of the telecommunications requirement that you may consider will be the *cutover plan* for services and operations. Whenever any new telecommunications resource, such as a new telephone service, replaces an existing system, there can be serious problems. The cutover plan is a subpart of the implementation plan.

Flash vs. Parallel Cutover

Cutovers can be either “flash” (happening suddenly, such as over a weekend - no overlap with existing services) or “parallel” (overlap of days or weeks with the existing system). Flash cutovers appear to be more attractive, because they are done all at once, do not drag on for days and weeks, and may cost less. However, in many cases, a flash cutover may be too risky or even impossible.

(Topic continued on next page)

14.5 Choose the Special Characteristics of a Telecommunications Requirement *(continued)*

Flash vs. Parallel
Cutover
(continued)

For example, if there is a requirement for extensive previous training, danger that data or communications might be lost, inconvenience to critical users, or security problems, then a flash cutover might not be possible and it may be necessary to operate the “old” and “new” telecommunication systems side-by-side for some time. However, the conversion period should be clearly spelled out in a cutover plan, to prevent unnecessary waste of time and money in maintaining parallel systems. You can see that the type of cutover will depend on the agency or program operations, such as schedule, security and access by critical users.

In most cases, the requirements analysis and the acquisition plan should include a detailed cutover plan, explaining how the cutover will be accomplished and including time frames for the completion.

It is difficult to predict which type of cutover will be the most advantageous for a given acquisition, but the following decision table may help you.

Decision Table for
Cutover

If...	Then...	Otherwise...
<ul style="list-style-type: none"> • Special or extensive training or orientation of users will be required before cutover, or... • Schedule or workload, such as around-the-clock operation, will not permit, or... • Backlog of work demands use of the old system, or... • There are special security requirements, or... • Certain critical users will limit the cutover, or be seriously inconvenienced or... • There is a risk that required data or information may be lost. 	<ul style="list-style-type: none"> • Consider a parallel cutover, because the risks may be too high. 	<ul style="list-style-type: none"> • Consider flash cutover for convenience.

14.5 Choose the Special Characteristics of a Telecommunications Requirement *(continued)*

Impact of a
Parallel Cutover

Remember, if the agency's cutover plan determined that a parallel cutover must be carried out for a long period of time, this might have a significant impact on the acquisition costs, since you may be paying for use of two systems at the same time.

Termination
Liability

A second characteristic of a telecommunications requirement that you must consider is *termination liability* on the part of the agency. A termination liability is the financial liability that an agency or user assumes when it terminates or disconnects from a telecommunication system for which it had signed a contract.

For example, suppose that an agency was already contracted and connected to a telecommunications system operated by the GSA for mandatory local telecommunications service and that agency then determined that it must eliminate half of its telephone line connections and replace them with special connections unique to that agency for security reasons. In such a case, the agency would incur a termination liability and be charged for leaving the system before the contract expired.

FIRMR Bulletin
C-15,
Attachment C

FIRMR Bulletin C-15 (Mandatory local telecommunications service) contains an Attachment C which explains the termination charges which apply to any agency that leaves a mandatory service location or reduces its requirement, during the life of the contract, to less than half its requirement at the time the contract was signed.

It explains that the agency can be charged a certain amount of money, based on the size and timing of the reduction or termination. The reason for this termination liability is because it raises the overhead cost share for the remaining users who stay in the contract and may cause the Government to violate the Rate Stabilization Agreement signed with the telecommunications company.

14.5 Choose the Special Characteristics of a Telecommunications Requirement *(continued)*

Minimizing Termination Liability

Therefore, in order to minimize the termination liability, you may be able to advise the agency to time its departure from a GSA consolidated telecommunications system to coincide with the end of a rate stabilization agreement, end of a contract payoff date, or the end of the GSA contract. *This could have an impact on the timing of the cutover.*

If the agency is unwilling or unable to time its departure and must accept the termination liability, you should explain that this will add to the life cycle cost of the acquisition and must be understood.

Contract Term

It is also important to consider the length of time, or *contract term*, that an agency will require the telecommunications service, facility or equipment. In considering the contract term, you must include:

- *One-time-costs*, such as start-up costs for space renovation, switching installation, recabling, and other such on-site costs. These costs can be difficult to amortize over a short life cycle but are easier to amortize over a longer period of time. For example, it would probably not be cost-effective to completely recable a building one month before a planned agency reorganization that will result in large scale transfers of personnel.
- *Building leases*, which should NOT expire before the telecommunications contract. If a building lease expires, and the agency leaves the building, it may also have to pay for termination costs of the telecommunications contract.

Remember that **the maximum contract term, including all options, will be no more than ten years.**

In some special cases, an agency or program office may have a *unique*, relatively short term requirement which includes special characteristics, such as an early start date, which cannot be met by FTS2000, or some special security characteristics (such as INFOSEC requirements) . Remember, FIRMR Bulletin C-18 explains that the agency must prepare a cost/benefit analysis that considers alternatives to satisfy the requirement.

In any case, regardless of the term of the contract, you should always consider both the mandatory-for-use and mandatory-for-consideration sources among the alternatives.

14.5 Choose the Special Characteristics of a Telecommunications Requirement *(continued)*

Lease vs. Purchase Decision	<p>Another decision that you will encounter in almost every telecommunications acquisition is the <i>lease vs. purchase decision</i>. Of course, you will normally make a lease vs. purchase analysis in any large scale acquisition, but there are some special considerations for telecommunications.</p>
Special Considerations Lease vs. Purchase	<p>When you perform a lease vs. purchase analysis for a telecommunications acquisition, you must consider the following special considerations, including “mandatory-for-use” and “mandatory-for-consideration programs,” total allowed life of contract, and purchase as the preferred method for acquisition of services.</p>
Mandatory-for-Use Programs	<p>There are already in being certain “mandatory-for-use” programs with many features that should meet nearly all requirements that an agency might have, so it is usually not advantageous to go outside these programs.</p> <p>The largest and best known of the programs is certainly FTS2000, managed by GSA. FIRMR Bulletin C-18 (Federal Telecommunications System 2000) explains the system. Briefly, FTS2000 is a contract for telecommunications services with AT&T (Network “A”) and US Sprint Telecommunications Company (Network “B”).</p> <p>FTS2000 assigns agencies to one of the two networks for switched voice service, switched data service, switched digital integrated service, packet switched service in digital form, video transmission service, dedicated transmission service (point-to-point private line transmission of voice and data) and integrated service digital network.</p> <p>FTS2000 is intended to provide modern telecommunications, is constantly being upgraded and enhanced, and should meet even the special requirements which some agencies may have. For example, it can provide special features such as on and off net calling, call screening, network conferencing, enhanced 800-type services, dedicated transmission services, two-way video transmission and many other services which an agency may require.</p> <p><i>You should be aware that an agency must justify any requirement for comparable services, and request an exception and explain why FTS2000 or other contracts do not meet its requirements.</i></p>

14.5 Choose the Special Characteristics of a Telecommunications Requirement *(continued)*

Mandatory-for-Consideration Programs

In addition to the mandatory-for-use programs, there are also mandatory-for-consideration programs such as the Federal Software Exchange Program

Total Contract Term

The third special consideration that you must remember in your lease vs. purchase decision is that, in a telecommunications contract, **the total contract term allowed, including all options, is ten years.**

That means that, even if an agency believes that it can enter into a very advantageous contract to meet its long-term-special telecommunications requirements, it may not exceed ten years with options, and then only after showing that it cannot use the “mandatory-for -use” and “mandatory-for-consideration” contracts and/or obtain an exemption.

Purchase of Services Preferred

Finally, the fourth special consideration for a lease vs. purchase decision in telecommunications is the preference for purchase of services. In this type of telecommunications acquisition, the supplier (telecommunications company) remains responsible for providing all the services at a favorable negotiated rate, including upgrades and options, while the Government is free to acquire equipment from other sources at lower prices, as needed.

This type of arrangement is usually the most advantageous alternative for the Government, and your lease vs. purchase decision for telecommunications should consider this fact.

Consider Four Methods of Acquisition

At a minimum, you should consider the four methods of acquisition in your analysis: lease, Lease To Ownership (LTOP), Lease With Option To Purchase (LWOP), and purchase. Remember that you should keep in mind the special considerations mentioned above, including the Government’s preference for purchase of services.

(Note - for a detailed explanation of these four methods, see Chapter 29, “Lease vs. Purchase of FIP Resources.”)

14.6. The Role of Standards in the Telecommunications Area

The Role of Standards in Telecommunications

This section discusses the role of standards in telecommunications. Since telecommunications is so complex, it is essential to have and use certain standards. The standards for telecommunications have been worked out over time among the Government (FCC), the private sector telecommunications companies and foreign governments. *You must consider standards in all acquisitions of telecommunications resources.*

Telecommunications standards exist for virtually all aspects of design and operations, including open system architecture, transmission types (packet vs. envelope), switches, line types and data. Many of these standards are closely related to the standards approved by groups such as the American National Standards Institute, the Electronic Industries Association (EIA), and the Telecommunications Industry Association (TIA).

Although you are not expected to be an expert on any of these standards, you should understand the types of standards discussed in this section, know where to find them and refer using agencies to these standards, as necessary, during acquisition planning.

Open Architecture Standards

The first type of standards that you should understand are those standards which concern the “architecture” or structure of a telecommunications system. These standards are critically important because they can affect the life cycle cost of a system, and restrict competition if proprietary or “closed” system architecture is used. You can see that if one vendor was allowed a monopoly due to special equipment or design, and other vendors could not access the telecommunications system, competition could be severely restricted.

Government Preference for Open Architecture

For that reason, it is the position of the Government that, whenever possible, a telecommunications system will make use of “open” architecture, so that different vendors can access and offer services and equipment to connect with the system. One way to do this, is to publish standards with which all vendors of telecommunications resources must comply.

You have already learned to consult the FIPS PUBS and FED-STDs as basic references on FIP and telecommunications standards. You should be aware of two particular standards which govern the architecture of telecommunications systems, GOSIP and POSIX.

14.6. The Role of Standards in the Telecommunications Area *(continued)*

GOSIP

GOSIP is the *Government Open Systems Interconnection Profile* (FIPS PUB 146), a standard for the acquisition of networks and services. It defines a common set of protocols for data communications. These protocols allow systems from different manufacturers and vendors to access, operate, and exchange information together. A goal of this standard is to allow a user to send information across any vendor's networks using procedures that are automatically accepted by all elements of the network system.

For example, if you send a data transmission from one point on the east coast to another point on the west coast, the message should pass through every switch and line owned by different vendors, to the recipient, connecting everywhere throughout the system, automatically.

Of course, if you are acquiring a new telecommunications network, you would want it to be compatible and interconnect with the existing networks and services under this standard.

POSIX

POSIX is the *Portable Operating System Interface for Computer Environments* (FIPS PUB 151), a standard for portable computer operating system and application development. This standard is intended for professional software developers. However, you should know that it is critically important because of the integration of software, portable computers, telephones and television into one massive telecommunications technology.

As a result of GOSIP and POSIX, it will be possible for two small portable computers anywhere in the world to communicate and exchange voice or data.

This means that if you are acquiring portable computers, you should be aware of these standards, especially if it is intended to connect these computers to the communications systems.

14.6. The Role of Standards in the Telecommunications Area *(continued)*

Transmission Type Standards

There are also standards established for the actual transmission of the signals over the system. These standards ensure that all users and telecommunications carriers follow the same procedures and protocols, so that there is no interference with traffic by other parties.

For example, CCITT Standard X.25 governs “*packet switching*.” It permits a telecommunications company offering FTS2000 service to break data transmission down into small units called “packets,” which are then individually addressed, switched, and routed through the network. At the destination, the message packets are electronically “reassembled” and the recipient receives what appears to be an unbroken message. This is a very cost effective way to transmit data across a large system with many users and switches.

The opposite of such packet switching is the transmission of the entire message in unbroken “envelopes.” For example, if an agency required a dedicated line that was connected between two points and not open to any other users, it might NOT require packet switching and might have each message transmitted as an entire envelope. Note that this is not economical or practical for high traffic with many users and switches.

Switch Types

The type of switch and the function it performs determine the standard that applies. Therefore, you should also understand switch types. The switch permits many users to share the telecommunications system by connecting them to parts of the total system only as they require such access to those parts. Without a switch, each user would have to be directly connected to all other users at the same time, an impossible arrangement for more than a few users. Even when you make a local telephone call, you are probably using at least several switches. The use of various switching options incurs different costs in a system. You should understand at least the following switches which may be part of a telecommunications requirement.

Local Switch

The local switch connects users who are close together and who are served by that same switch. For example, two telephones or FAX machines in the same neighborhood or small town may be connected during a call by only one local switch. If they are farther apart, they may be connected by more than one local switch.

14.6. The Role of Standards in the Telecommunications Area *(continued)*

Intercity Switch

The intercity switch connects users who are too far removed from each other to be connected by local switches. For example, on a long distance telephone call, your call may pass through several local, then several intercity switches, then finally through more local switches, before reaching the destination.

Wiring Standards

You learned that “lines” and “wiring” are not the same. There are standards that apply to lines and also standards that apply to the wiring in buildings. These standards are needed to insure that the building’s wiring can accommodate the necessary connections to the telecommunications system. You can see that if the wiring in a building cannot support a planned telecommunications system, there is no point in proceeding with the acquisition until the wiring is upgraded.

You can find information on the standards for building wiring in:

- the *Federal Building Telecommunications Wiring Standard* (FIPS PUB 174). It provides characteristics for a building’s telecommunications wiring to support different products from different vendors. You must specify in a telecommunications solicitation and contract that all wiring complies with FIPS PUB 174.
 - the *Federal Building Standard for Telecommunications Pathways* (FIPS PUB 175). It specifies the **minimum** requirements for telecommunications pathways and spaces within a Federal office building and between office buildings. You will need this standard for the architectural design of new buildings.
 - the *Residential and Light Commercial Telecommunications Wiring Standard* (FIPS PUB 176). It specifies the standards for the telecommunications wiring in small buildings, such as those that were not originally designed as modern Federal office buildings.
-

14.7. Telecommunications Sources Provided by GSA and Other Than by GSA

Sources for Telecommuni-
cations

This section explains the various sources available for telecommunications, including both GSA and non-GSA sources. Sources may be either mandatory-for-use, mandatory-for-consideration or contractual, if neither of these meets the requirements.

Preference for Commercial Off-the-Shelf (COTS) Items

The Government *prefers commercial off-the-shelf (COTS) items whenever possible* in a FIP resources acquisition. This is based on the experience that the acquisition of COTS items allows the Government to avoid expensive development costs and promote more competition in the market place. This is also true of telecommunications acquisitions. Consolidated Local Service is considered COTS.

For this reason, you should check agency requirements to make sure that they are expressed in functional terms. If requirements are not expressed in functional terms, the result may be to generate specifications that are overly restrictive and favor one vendor, thus restricting competition.

FIRMR 201-24.1
FIRMR 201-
20.2031(a)(3)

FIRMR 201-24.1 provides information on mandatory-for-use programs, including FTS2000, consolidated local telecommunications service, and the National Security and Emergency Preparedness (NSEP). In accordance with the intent of FIRMR 201-20.203-1(a)(3), agencies should use mandatory-for-use programs when their requirements can be met by these programs and when their use is advantageous to the Government.

FIRMR 201-24.2

FIRMR 201-24.2 provides information on the mandatory-for-consideration programs, including FSTS and INFOSEC.

14.7. Telecommunications Sources Provided by GSA and Other Than by GSA *(continued)*

Reliance on the Requirements Analysis

As with other FIP resource acquisitions, the method of acquisition and source that you choose will depend on the result of the requirements analysis and analysis of alternatives. However, in the case of telecommunications, the requirements analysis must consider factors such as the agency's mission and functions, the long range plan, the current system, interviews with key technical and supervisory persons, special requirements and in-house management capability.

Types of Requirements

The agency's technical requirements depend on factors such as the types of services required during the life cycle of the system, expected traffic, growth, the grade of service desired, reliability and availability demanded.

These factors can usually only be determined by telecommunications experts who will perform the requirements survey and the requirements analysis. However, you must review their findings, conclusions, and recommendations in your analysis of alternatives to determine the most advantageous method of acquisition and source.

Basic Sources for Telecommunications Resources

There are three general sources for telecommunications. Basically, these sources for telecommunications include leasing or buying from:

1. Sources that are mandatory-for-use;
 2. Sources that are mandatory-for-consideration; and
 3. Other contractual sources (when justified).
-

14.7. Telecommunications Sources Provided by GSA and Other Than by GSA *(continued)*

Mandatory-for-Use Contracts

As you have learned, *FTS2000* is managed by GSA and is mandatory-for-use by other agencies, unless an agency can justify an exemption based on special requirements, or has been delegated procurement authority for special reasons. *FTS2000* is the most widely used and best known of the mandatory-for-use systems available, and provides a wide range of voice and data transmission and supporting services. (See FIRMR Bulletins C-15 and C-18).

In addition, secure voice service to protect sensitive and classified information is available through the *Federal Security Telephone Service (FSTS)*. This service is available for worldwide service and will meet most agency requirements of this type. (See FIRMR Bulletin C-19.)

Consolidated Local Telecommunications Services

Another mandatory-for-use program that you may encounter is *consolidated local telecommunications services*. This GSA program is explained in FIRMR 201-24.102. This service is available in most buildings occupied by Federal employees and includes switching, certain universal features and applications and wire and cable to designated points of connection. (Also see FIRMR Bulletin C-15.)

NSEP

National Security and Emergency Preparedness (NSEP) is another mandatory-for-use program managed by GSA, and is described in FIRMR 201-24.106. It provides for emergency telecommunications for wartime and non-wartime emergencies. It is intended to allow non-defense agencies to plan, obtain and maintain continuity of telecommunications, including local, long distance and special telecommunications during emergencies, including wartime. (Also see FIRMR Bulletin C-20.)

Remember, these mandatory-for-use services will satisfy many agency telecommunications requirements.

14.7. Telecommunications Sources Provided by GSA and Other Than by GSA *(continued)*

Mandatory-for-Consideration Contracts

In addition to the mandatory-for-use systems, there are mandatory-for-consideration systems which you should know about, because they must at least be considered in a telecommunications acquisition. These include FSTS and INFOSEC.

POTS

The Purchase of Telecommunication Services (POTS) program, as described in FIRMR 201-24.104, is a nonmandatory program that provides for the purchase, installation, maintenance, repair, removal and relocation of telephone equipment, such as telephones. It too provides for exemptions, but should meet many agency requirements for telephone equipment. (Also see FIRMR Bulletin C-21.)

FSTS

FIRMR 201-24.201-1

The Federal Secure Telephone Service (FSTS) is described in FIRMR 201-24.201-1 as a “worldwide secure voice service designed to protect sensitive and classified voice transmission.” It should be considered for all agency requirements for transmission of sensitive or classified voice information. (Also see FIRMR Bulletin C-19.)

INFOSEC

Information security (INFOSEC) is the composite of factors necessary to protect FIP systems and the information they process to prevent exploitation and to ensure authenticity. This mandatory-for-consideration program is also offered by GSA to agencies. It includes installation, maintenance, key distribution, design, engineering and consulting. (Also See FIRMR Bulletin C-19. Chapter 19 provides more discussion of security.)

Additional Assistance WITS and the Service Oversight Center (SOC)

If you need assistance or information on telecommunications, especially, local telecommunications such as local telephone services available, you are encouraged to contact the Washington Interagency Telephone Service (WITS). Those civilian offices not covered by WITS are covered by Centrex.

Remember, if you need assistance or information on *long distance services* available, contact the appropriate FTS2000 service oversight center.

14.7. Telecommunications Sources Provided by GSA and Other Than by GSA *(continued)*

DoD Agency Requirements

DFARS 239.7407-2

DoD utilizes local telephone services. For DoD agency requirements, you should also check DFARS 239.7407-2, concerning Communication Service Authorizations (CSAs), DD Form 428. A requiring agency or activity can submit a CSA to award, cancel, modify or terminate telecommunications services. The CSA must:

- reference the existing basic agreement for telecommunications;
- specify the types and quantities of telecommunications services required, as well as the tariff (or other price if a tariff is not available) of those services and equipment;
- specify the premises involved;
- cite the address for billing;
- identify the disbursing office; and
- provide funding information.

The CSA should also include an expiration date. As a contract specialist, you are responsible to check the contents of the CSA. You should also be prepared to modify the CSA to reflect any price increases.

You should be aware that the price for the telecommunications services may be subject to the existing tariffs that have been approved by the FCC and public utilities commissions. The tariffs are subject to change, so you should determine the existing tariffs and any expected changes when calculating the expected price for services.

14.8. How to Distinguish the Differences in the Approval Process for the Acquisition of All Types of Telecommunications Services

Differences in the Approval Process for Telecommunications

This final section in this chapter discusses the differences in the approval process for the acquisition of all types of required telecommunications services. You will see that the approval process may vary for the different types of telecommunications services that you may request. This section emphasizes those actions in the approval process for which you as a contract specialist or contracting officer will have responsibility.

The approval process will depend on factors such as:

- whether a DPA has been granted;
 - whether an exemption or deviation has been requested and granted;
 - availability of the service from mandatory-for-use or mandatory-for-consideration.
 - determination of the most advantageous source to the Government.
-

GSA's Authority

FIRMR 201-1.003 FIRMR 201-20.306

You will recall that GSA has the exclusive procurement authority for all types of FIP resources, including telecommunications. Under FIRMR 201-1.003, this is not intended to interfere with the determination by agencies of their individual FIP resource requirements (including telecommunications resources.) Moreover, GSA can delegate some of this authority to agencies, using a Delegation of Procurement Authority (DPA) for GSA's multiyear contracting authority for telecommunication resources (FIRMR 201-20.306).

Agency DSO

Also, you will recall that FIRMR 201-2.001 requires the head of each agency to name a designated senior official (DSO) who will be responsible for the conduct of and accountability for acquisitions made under the DPA (FIRMR 201-2.001(6)(b)).

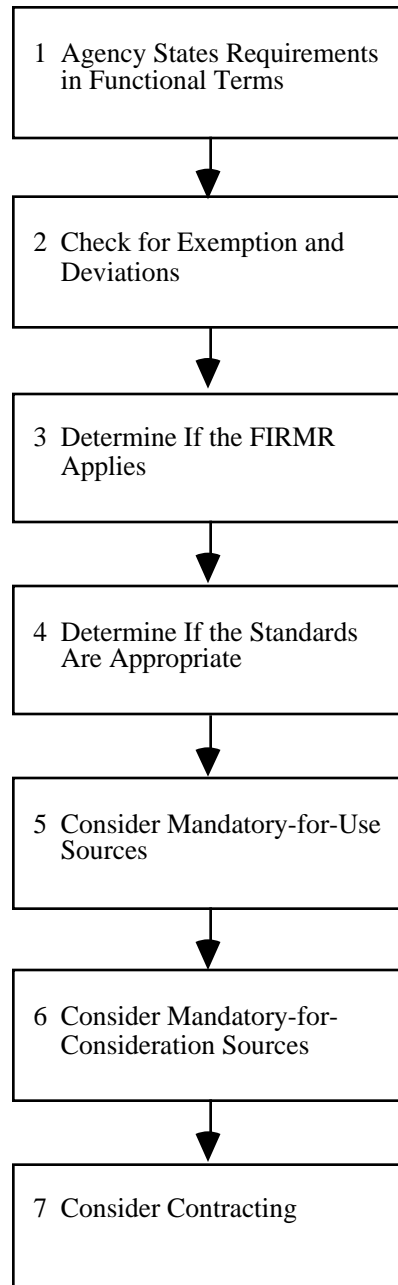
DPA

In some cases, the agency will already possess a DPA from GSA in either a regulatory delegation, specific agency delegation or specific acquisition delegation. If this is the case, the agency will have the authority to proceed with an acquisition of telecommunications resources and not require further GSA review or approval.

14.8. How to Distinguish the Differences in the Approval Process for the Acquisition of All Types of Telecommunications Services *(continued)*

Sequence of Events

The sequence of events in the approval process for a telecommunications acquisition begins when the agency or program office develops the requirement. The following flow chart depicts these events, with emphasis on the actions with which you will be concerned.



14.8. How to Distinguish the Differences in the Approval Process for the Acquisition of All Types of Telecommunications Services *(continued)*

Step 1– Agency States Requirement in Functional Terms

The requiring agency should state the requirement in functional terms, including the use of functional specifications and prepare a detailed requirements analysis (FIRMR 201-20.1), including justification (if necessary) as to why a “specific make and model” or “compatibility-limited requirement” may be necessary, or why an exemption or deviation is required from mandatory-for-use sources, such as FTS2000.

If the requirement is NOT stated in functional terms, it may be more difficult for you to later determine which sources are appropriate.

Step 2–Check for Exemptions and Deviations

For example, if the requirement is solely for providing electronic office equipment accessibility for employees with disabilities, the agency’s DSO (or authorized representative) may authorize an exemption from the FIRMR (FIRMR 201-3.402). In this case, you, as a contract specialist, would probably not be very involved in the initiation of the requirement, except perhaps to provide information on references to technical personnel from the agency.

If a deviation has been requested for the telecommunications acquisition, you should follow the deviation procedures in FAR Subpart 1.4, and FIRMR 201-39.104-1 as part of the overall approval process. Requests for deviations from the FIRMR should be forwarded to:

General Services Administration
Policy and Regulations Division
18th and F Street, NW
Washington, DC 20405

14.8. How to Distinguish the Differences in the Approval Process for the Acquisition of All Types of Telecommunications Services *(continued)*

The Contracting Office Review

The contracting office reviews the requirements analysis, to see if it meets the requirements of the FIRMR, FAR and other appropriate references. If the requirement meets the guidelines for an exemption, you will still review the exemption. If the requirement contains a request for a deviation (FIRMR 201-4.001), this will require greater effort to determine whether a deviation should be granted.

As with any FIP resource acquisition, you will also review the requirement for compliance with the predominant considerations (FIRMR 201-17.001), including an acquisition that results in the most advantageous alternative to the Government. In the case of telecommunications, this includes:

- Sharing and reuse of existing resources
- Use of GSA services (such as WITS); and
- Acquisition of agency resources by contracting.

Step 3— Determine If FIRMR Applies

A telecommunications acquisition is a FIP resources acquisition, so one of your first actions in the approval process is to determine if the FIRMR applies. (See FIRMR Bulletin A-1). If it does, you are then concerned as to whether the proposed standards for the acquisition are appropriate.

Step 4— Determine If the Standards Are Appropriate

Of course, in any acquisition, you will check the proposed standards to determine if they appear appropriate, and consult with technical experts if you have any questions before you incorporate the standards into the solicitation. However, in a telecommunications acquisition, you will check the proposed standards to make sure they conform (if applicable) to the appropriate Federal Telecommunications Standards (FED-STDS).

14.8. How to Distinguish the Differences in the Approval Process for the Acquisition of All Types of Telecommunications Services *(continued)*

Step 5– Consider Mandatory-for- Use Sources

Assuming there are no exemptions or deviations requested, and the requirement is applicable under the FIRMR, the next thing you will do is consider the applicability of mandatory-for-use sources (including telecommunications services and contracts) such as FTS2000, consolidated local telecommunications services or NSEP, in accordance with FIRMR 201-24.1.

Remember, it is not necessary that the mandatory-for-use source fit the entire requirement. Such sources may be used to meet only a part of the requirement, such as purchase of telephones and services, even if the remainder of the requirement must be met through acquisition by further contracting.

Remember the Exemptions

In any case, even where it appears that a mandatory-for-use source must be used, be sure to check for exemptions. For example, the FIRMR provides for some exemptions based on reasons such as special needs, equipment or services unavailable from the contractor, unique budget problems, short term lease requirements, or other reasons approved by the GSA regional Telecommunications Office (See FIRMR Bulletin C-21).

If it appears that one of these mandatory-for-use sources is appropriate, even for part of the requirement, you should inform the agency.

14.8. How to Distinguish the Differences in the Approval Process for the Acquisition of All Types of Telecommunications Services *(continued)*

Step 6– Consider Mandatory-for- Consideration Sources

If the mandatory-for-use sources are not appropriate to meet the requirement, you should next consider whether mandatory-for-consideration sources, such as FSTS and INFOSEC, are appropriate. Again, it is not necessary that the mandatory-for-consideration source meet the entire requirement; it may be appropriate for only a part of the requirement, but you should not overlook it.

Step 7– Consider Contracting

If neither the mandatory-for-use nor the mandatory-for-consideration sources are appropriate for the requirement, you will then approve the requirement for acquisition by contracting. If you proceed with contracting, the appropriate FED-STDS and specifications for telecommunications must be incorporated into the solicitation. If these are not appropriate at this point, you will not approve the acquisition until they are corrected.

SUMMARY

In this chapter, you learned to distinguish among and choose the appropriate methods of acquisition available for acquiring telecommunications. In the next chapter, you will learn how to determine whether an acquisition is covered by the FIRMR.

CHAPTER 15

DETERMINATION OF ACQUISITIONS COVERED BY THE FIRMR

Chapter Vignette

Mark was already becoming impressed with all the special considerations that affect a FIP resources acquisition. It really is different from the more general types of acquisitions that he had done previously. He realized that Marcia had been properly cautious in getting him to first read all the background information before digging into the technical requirements. Still, he was eager to get into the actual requirement.

“I think we can finally get a look at the requirement now,” he said.

“Yes, I think so too,” she said. “I think we are ready to determine how this proposed acquisition is covered by the policies in the FAR and FIRMR, and whether it is ‘incidental’ or ‘significant.’”

Course Learning Objectives

At the end of this chapter, you will be able to:

Overall:

Determine if proposed acquisitions are covered by the FIRMR (FIRMR Bulletin A-1)

Individual:

- 15.1 Determine if proposed acquisitions are covered by the FIRMR (FIRMR Bulletin A-1).
- 15.2 Distinguish between the terms “incidental” and “significant” as they apply to the acquisition of FIP resources by Government contractors.
- 15.3 Explain the importance of FIRMR Bulletin A-1.

Chapter Overview

Scope This chapter presents the information you will need to determine whether a proposed acquisition is covered by the FIRMR. You will learn that not all acquisitions of FIP resources are automatically covered—and that some acquisitions you would not expect to be covered are!

References You should consult the following references in order to understand topics discussed in this chapter:

FIRMR 201-1.002
 FIRMR 201-4
 FIRMR 201-20.305(b)(3)
 FIRMR 201-39.101-3
 FIRMR 201-39.2
 FIRMR 201-39.5202-1
 FIRMR Bulletin A-1
 DFARS 239.001

Topics Covered in this Chapter This chapter includes the following topics:

SECTION	TITLE	PAGE
15.1	How to Determine If Proposed Acquisitions Are Covered by the FIRMR	15-4
15.2	“Incidental” <i>versus</i> “Significant” Acquisition of FIP Resources by Government Contractors	15-14
15.3	The Importance of FIRMR Bulletin A-1	15-17

15.1 How to Determine If Proposed Acquisitions Are Covered by the FIRMR

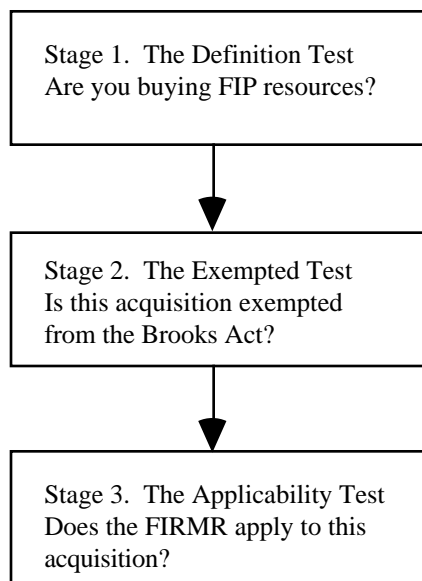
Introduction

Not all acquisitions associated with FIP equipment and resources are covered by the FIRMR. As a contract specialist or contracting officer, one of the key decisions that you will have to make is determining whether or not your acquisition is covered by the FIRMR. You are not alone in making this decision. Seek assistance from your agency Designated Senior Official (DSO). This chapter discusses how you and other agency officials can use certain tests to determine whether the FIRMR applies to an acquisition.

Definitions, Exemptions, and Applicability

As you learned in Chapter 15, the FIRMR defines those types of FIP resource acquisitions that are covered by the FIRMR. However, the definitions alone are not sufficient. You must also be able to apply your judgment in “*exemption and applicability tests*” to determine whether the FIRMR applies to the acquisition in question. To do so, you must understand the differences between FIP resource requirements that are “significant” and those that are merely “incidental.”

You decide whether the FIRMR applies to an acquisition in a three stage process. In any one of the stages, you can decide that the FIRMR definitely applies or definitely does NOT apply to your acquisition. At the point that you make your decision, you no longer need to proceed in the process. In the three-stage process, you decide:



15.1 How to Determine If Proposed Acquisitions Are Covered by the FIRMR

(continued)

Stage 1: The Definitions Test

FIRMR 201-4 FIRMR 201-39.2

As you learned in Chapter 6, FIRMR 201-4, *Definitions and Acronyms*, defines most terms you will encounter in a FIP resource acquisition. Of the terms, the most crucial is the definition for FIP resources (which is also repeated in FIRMR Subpart 201-39.2). You should also recall that in defining FIP resources, GSA adopted the statutory terminology for “ADPE” and also defined FIP equipment, maintenance, supplies, services, software, support services, and system.

In FIRMR Bulletin A-1, *Federal Information Resources Management Regulation (FIRMR) Applicability*, Appendix A, GSA expands on these definitions with examples of what is—and is not—a FIP resource. See the following table.

*In the first stage of your determination, you must decide **if part or all** of the resources you will be buying are—or may be—FIP resources. The following table has some of the examples from FIRMR Bulletin A-1. When you are on the job, you should refer to the bulletin itself when determining whether you are buying a FIP resource.*

(continued on next page)

Stage 1: Definitions Test

Category	Definition	Includes, for example	Excludes, for example
FIP system	Any organized combination for FIP equipment, software, services, support services, or related supplies	A minicomputer with a printer, workstations, and a tape drive, the associated systems programs and applications programs, and the backup tape, disks, and printer paper—a PBX (Private Branch Exchange) with software, telephones, and fax equipment and the connecting cables or wires	An organized combination of non-FIP products with embedded FIP resources
FIP Equipment	Any equipment or interconnected system or subsystems of equipment used in the automatic acquisition, storage, manipulation management, movement, control, display, switching, interchange, transmission, or reception of data or information	Data processing and switching equipment, including computers and PBXs; ancillary equipment, such as disk and tape drives, plotters, printers, storage and backup devices, digital imaging and optical storage devices, office automation equipment, etc.; telecommunications networks and related equipment, such as voice and data networks, modems, data encryption devices, microwave and satellite equipment, facsimile equipment, etc.	Embedded FIP equipment—meaning FIP equipment that is embedded in and an integral part of a product that is NOT FIP equipment— <i>when</i> the embedded FIP equipment cannot operate independently without substantial modifications OR when the value of the embedded FIP resource is less than \$500,000 OR less than 20% of the value of the product, whichever is lower. Examples include automobiles, elevators, blood analyzers, and drill presses that use microprocessors for control
FIP software	Any software, including firmware, specially designed to make use of and extend the capabilities of FIP equipment	Systems programs, such as compilers, interpreters, utility programs, and diagnostic programs; application programs and commercially available programs, such as word processing, graphics, communications, and database management systems; independent subroutines; databases; and software documentation, etc.	Software for embedded FIP resources, such as that required for the blood analyzer <i>(Table continued on next page)</i>

Stage 1: Definitions Test *(continued)*

Category	Definition	Includes, for example	Excludes, for example
FIP services	Any service, other than FIP support services, performed or furnished by using FIP equipment or software	Teleprocessing, local batch processing, electronic mail, voice mail, centrex, cellular telephone, facsimile, and packet switching	Transcription services for hard copy of dictated or recorded information
FIP support services	Any commercial nonpersonal services, including FIP maintenance used in support of FIP resources	Source data entry; computer output microfilming; software conversion; training; FIP resource planning; capability and performance validation; studies, such as requirements analyses, alternatives analyses, benefit-cost analyses, and conversion studies; facilities management; software development; systems analysis and design; equipment operation; network management; site preparation; etc.	Support services for embedded FIP resources, such as the development of custom software for numerically controlled drill presses
FIP Support Services (FIP maintenance)	Those examination, testing, repair, or part replacement functions performed on FIP equipment or software	Preventive and remedial equipment diagnostic and repair services, field engineering equipment change or modification, and software modifications and upgrades	Maintenance of products with embedded FIP resources, such as elevator maintenance
FIP-related supplies	Any consumable item designed specifically for use with FIP equipment, software, services, or support services	Telecommunications fuses and connectors, floppy disks, CD-ROM and laser optical disks, backup cartridges, cables and wires, print wheels and ribbons, FIP equipment cleaning kits, tapes, disks, etc.	Supplies for products with embedded FIP resources, such as paper for a blood analyzer

(continued on next page)

15.1 How to Determine If Proposed Acquisitions Are Covered by the FIRMR

(continued)

Severing FIP Resources

FIRMR 201-20.305(b)(3)

If you determine that *part* of the resources you are buying are FIP resources, the FIRMR requires that you consider *severing* the FIP resources and buying them separately when:

- The requirement for FIP resources can be clearly identified and explicitly stated in a solicitation,
- The technical and operational needs can be satisfied by severing requirements for FIP resources from requirements for other resources,
- The items can be acquired by the Government and delivered to the contractor as required by the production schedule,
- Adequate price competition can be achieved on the FIP resources portion of the requirements,
- The expected cost reduction will exceed the added costs of the additional acquisition by contracting,
- Severing will not affect the contractor's ability and responsibility to perform as required by the contract, AND
- The estimated dollar value of FIP resources explicitly required by the agency in the solicitation exceeds the thresholds for regulatory delegations specified in FIRMR 201-20.305-1—the thresholds at which a specific acquisition delegation of procurement authority is required.

Given these conditions that must be met when severing a FIP resources buy, it is unlikely you will do so. *Nonetheless, you should be aware of the requirements, since documenting the basis for your decision not to sever may be prudent.*

(continued on next page)

15.1 How to Determine If Proposed Acquisitions Are Covered by the FIRMR

(continued)

Stage 2: The Exemptions Test

FIRMR 201-1.002-2

As you learned in Chapters 1 and 6, the law sets forth certain exemptions to the applicability of the Brooks Act. If you are exempted from the Brooks Act, you are exempted from the FIRMR, since it is prepared by GSA under the law's authority. You will recall, for example, that certain DOD buys and buys for radar, sonar, and television equipment are exempted by the Warner Amendment and Paperwork Reduction Reauthorization Act. There are board decisions which illustrate that decisions of applicability and exemption are not clear cut when determining FIP applicability to radar, sonar, and television.

If you decided in Stage 1 that part or all of what you are buying is FIP resources, you need to determine if any exemptions apply. If any of the exemptions apply, you do not need to proceed to the Stage 3 applicability test. Your procurement is NOT subject to the FIRMR. However, these decisions are not always clear cut. As you learned in Chapter 1, the General Services Administration Board of Contract Appeals has authority under the Paperwork Reduction Reauthorization Act to interpret what is "ADPE" under the law. This means that GSBICA protest decisions can affect your decision. Therefore, before deciding conclusively that a procurement is exempt from the FIRMR, you should check with your legal department. The flowchart on page 15-10 summarizes the exemptions to FIRMR applicability.

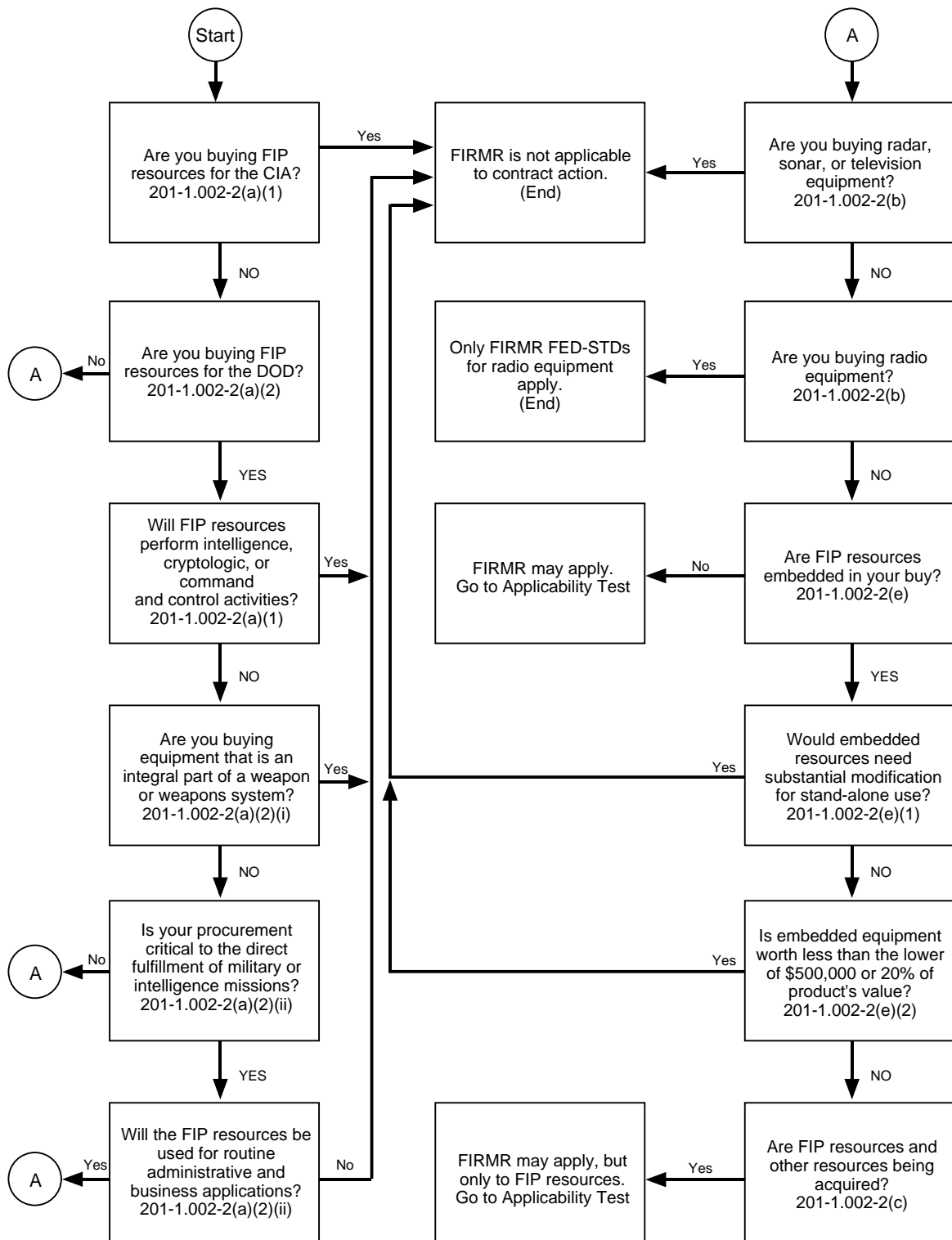
Flowchart Use: Exemptions to the FIRMR

It's easy to use the flowchart to help with your determination. For example, if you are buying a FIP resource, such as a computer, to analyze classified military intelligence information, the FIRMR would NOT apply. Using the Stage 2 flowchart, you would make these determinations:

Question	Answer	Result
Are you buying FIP resources for the CIA?	No	(continue to next question)
Are you buying FIP resources for the DOD?	Yes	(continue to next question)
Will FIP resources perform intelligence, cryptologic, or command and control activities?	Yes	FIRMR is not applicable to contract action. (End)

(Topic continued on next page)

Stage 2: Exemptions Test



15.1 How to Determine If Proposed Acquisitions Are Covered by the FIRMR

(continued)

Flowchart Use:
Exemptions to the
FIRMR
(continued)

However, if you are buying a computer to write routine, unclassified correspondence, such as letters or personnel record files, in the same military intelligence organization, the FIRMR **WOULD** apply. Using the Stage 2 flowchart primarily, you would make these determinations:

Question	Answer	Result
Are you buying FIP resources for the CIA?	No	(continue to next question)
Are you buying FIP resources for the DOD?	Yes	(continue to next question)
Will FIP resources perform intelligence, cryptologic, or command and control activities?	No	(continue to next question)
Are you buying equipment that is an integral part of a weapon or weapons system?	No	(continue to next question)
Is your procurement critical to the direct fulfillment of military or intelligence operations?	Yes	(continue to next question)
Will the FIP resources be used for routine administrative and business applications?	Yes	(continue to next question)
Are you buying radar, sonar, or television equipment?	No	(continue to next question)
Are you buying radio equipment?	No	(continue to next question)
Are FIP resources embedded in your buy?	No	FIRMR may apply. Go to Applicability Test in Stage 3.
Does the solicitation or contract require the delivery of FIP resources for use by a Federal agency or by any non-Federal users designated by the agency?	Yes	FIRMR is applicable to contract action

You **MUST** be careful **NOT** to assume that just because a FIP resource is acquired by a military unit, that it is exempted from the terms of the FIRMR. However, if you decide that the FIRMR does exempt your acquisition, you should document your decision in accordance with your agency's procedures.

(Topic continued on next page)

15.1 How to Determine If Proposed Acquisitions Are Covered by the FIRMR

(continued)

Flowchart Use:
Exemptions to the
FIRMR
(continued)

DFARS 239.001 & 239.001-70

DFARS 239.001 (Policy) explains that when a DOD acquisition of FIP resources is subject to the Brooks Act, then the FIRMR takes precedence over the DFARS. DFARS 239.001-70 (Warner Amendment Exemptions for FIP resources) elaborates on the applicability of the Warner Amendment exemptions.

Specifically, DFARS 239.001-70 clarifies that equipment being exempted on the basis of the first four conditions—intelligence, cryptology, command and control, and weapons-system integral—may also be used for other purposes such as routine administrative and business functions. However, if equipment that directly fulfills a military or intelligence function (the fifth exemption) also supports routine administrative and business functions, *then the FIP resources may NOT be excluded from the FIRMR*. These conditions are reflected in the Stage 2 flowchart.

Remember that these types of decisions are not always clear. Most DoD activities are given in-house authority. At a certain level, however, they must seek guidance.

15.1 How to Determine If Proposed Acquisitions Are Covered by the FIRMR

(continued)

Stage 3: The Applicability Test

If part or all of what you are buying is FIP resources and none of the exemptions to the use of the FIRMR apply, you must next consider the applicability tests.

FIRMR 201- 39.101-3

FIRMR 201-39.101-3 discusses “Applicability.” It explains that the FIRMR applies to a FIP resources acquisition whenever certain conditions are met. These conditions include:

If the acquisition, management, and/or use of the FIP resources...	Then the FIRMR...
Is by a Federal agency (or non-Federal users designated by the agency) and no exemptions apply	Applies
Is by any Federal agency solicitation or contract when: <ul style="list-style-type: none"> the solicitation or contract requires delivery of FIP resources for use by a Federal agency or users designated by the agency OR the solicitation or contract explicitly requires the use by the contractor of FIP resources that are NOT <i>incidental</i> to the performance of a contract OR the solicitation or contract requires the performance of a service or the furnishing of a product that is performed or produced making <i>significant</i> use of FIP resources that are NOT <i>incidental</i> to the performance of the contract. 	Applies

You will note that this decision table primarily tests the applicability of the FIRMR to contractor acquisition or use of FIP resources. This is the final stage of determining FIRMR applicability. A flowchart for the applicability test is on page 15-18.

But, before you start to use the flowchart, you need to review the significance of the terms “incidental” and “significant.”

15.2 “Incidental” versus “Significant” Acquisition of FIP Resources by Government Contractors

“Incidental” and
“Significant”

FIRMR 201-39.101-3

Because a key part of the applicability test is whether or not a contract or solicitation requires “incidental” or “significant” use of FIP resources by the contractor, you must know the meaning of the terms, the differences between them, and how to apply them. *This is important, not only to determine FIRMR applicability, but also because contractors can charge the costs of “significant” FIP resources directly to a specific contract.*

FIRMR 201-29.101-
3(b)(5)(ii)

Embedded FIP equipment is FIP equipment that is an integral part of the product, where the principal function of the product is not the “automatic acquisition, storage, manipulation, management, movement, control, display, switching, interchange, transmission, or reception of data or information.”

“Incidental.” Contractor-acquired FIP resources are incidental to performance of a contract when:

- **Condition 1:** None of the principal tasks of the contract depend directly on the use of the FIP resources,

OR

- **Condition 2:** The requirements of the contract do not have the effect of substantially restricting the contractor’s discretion in the acquisition and management of FIP resources, whether the use of FIP resources is or is not specifically stated in the contract.

Since most products and services are now typically produced with at least some FIP resource use, the primary test for incidental use is the latter of the two conditions. To use this test, you would review the solicitation provisions or contract clauses. If the document specifies, in a way that restricts the contractor, . . .

- What FIP resources will be used,
- How FIP resources will be bought or used, or
- When or where FIP resources will be used

. . . then FIP resources are NOT INCIDENTAL and may be significant to contract performance.

On the other hand, a solicitation requiring that (not what) FIP resources be used or that (not what) machine-readable information be provided does not restrict the contractor’s actions and provides for *incidental use*.

(Topic continued on next page)

15.2 “Incidental” *versus* “Significant” Acquisition of FIP Resources by Government Contractors *(continued)*

“Incidental” and
“Significant”
(continued)

“Significant.” Contractor-acquired FIP resources are significant to performance of a contract when:

- **Condition 1:** The service or product of the contract could not reasonably be produced or performed without the use of FIP resources

AND

- **Condition 2:** The dollar value of FIP resources expended by the contractor to perform the service or furnish the product is expected to exceed \$500,000 or 20% of the estimated cost of the contract, whichever amount is lower.

Again, in today’s workplace, most products and services cannot reasonably be produced or performed without the use of FIP resources. Consider such products and services as:

- Design and development of new products [computer-aided design (CAD) and computer-aided manufacturing (CAM)];
- Production of studies, manuals, and handbooks (word processing, graphics, and spreadsheets);
- Management of information (databases); and even
- Contract performance reporting (spreadsheets, project management, and word processing).

So again, the most meaningful test becomes Condition 2. To apply this test, you follow five steps:

Step 1: Calculate 20% of the estimated total contract cost

Step 2: Compare the number from step 1 to \$500,000

Step 3: Select the lower of the two costs

Step 4: Determine the estimated value of the FIP resources

Step 5: Compare the value of FIP resources (step 4) to the step 3 number.

If FIP resources will cost *more* than the step 3 number (the lower of \$500,000 or 20% of estimated contract value), then FIP resources are *significant* and the FIRMR applies.

(Topic continued on next page)

15.2 “Incidental” *versus* “Significant” Acquisition of FIP Resources by Government Contractors *(continued)*

“Incidental” and
“Significant”
(continued)

If FIP resources will cost *less* than the step 3 number, then FIP resources are NOT significant and the FIRMR does NOT apply.

Examples: If a construction contractor is required to submit a routine two page status report each month, that task does not reasonably demand the acquisition or use of FIP resources (a computer) because it can be done on a typewriter.

In another case, a contractor on a complex manufacturing project worth \$2,000,000 will acquire a computer to assist in designing and developing the products (CAD-CAM) and to track on-going changes in hundreds of computer-generated engineering drawings every day. It is sensible to conclude that task could not be done reasonably without a computer—so the acquisition and use of FIP resources in this case is *significant, if the dollar thresholds are exceeded*. In this case:

Step 1: 20% of \$2,000,000 = \$400,000

Step 2: \$400,000 compared to \$500,000

Step 3: The lower of the two costs = \$400,000

Step 4: Estimated value of the FIP resources = \$410,000

Step 5: \$410,000 exceeds \$400,000 = *Significant use*

You are now ready to learn more about the applicability flowchart used in the Stage 3 determination. As you review it, note especially the first question:

If the nature of the procurement requires a contractor to deliver FIP resources to the Government or a Government-designated user, the FIRMR applies—and the tests for incidental or significant use do NOT apply!

15.3 The Importance of FIRMR Bulletin A-1

FIRMR Bulletin A-1

FIRMR Bulletin A-1 explains in detail not only the test of applicability, but also the tests of definition and exemptions. You must understand all these to determine if the FIRMR applies to a FIP acquisition or other contract action. You will find that, in some cases, it is easy to decide whether the FIRMR applies. However, in many cases, the decision is not so apparent and you must be able to ask the right questions concerning applicability.

FIRMR Bulletin A-1 is important and helpful because it clarifies the test of applicability and shows you the *six questions to ask* concerning contractor acquisition of FIP resources.

FIRMR Bulletin A-1, Appendix C, also provides eight examples that test FIRMR applicability when contracting for FIP resources. You should review these examples to practice determining whether the FIRMR applies to different situations.

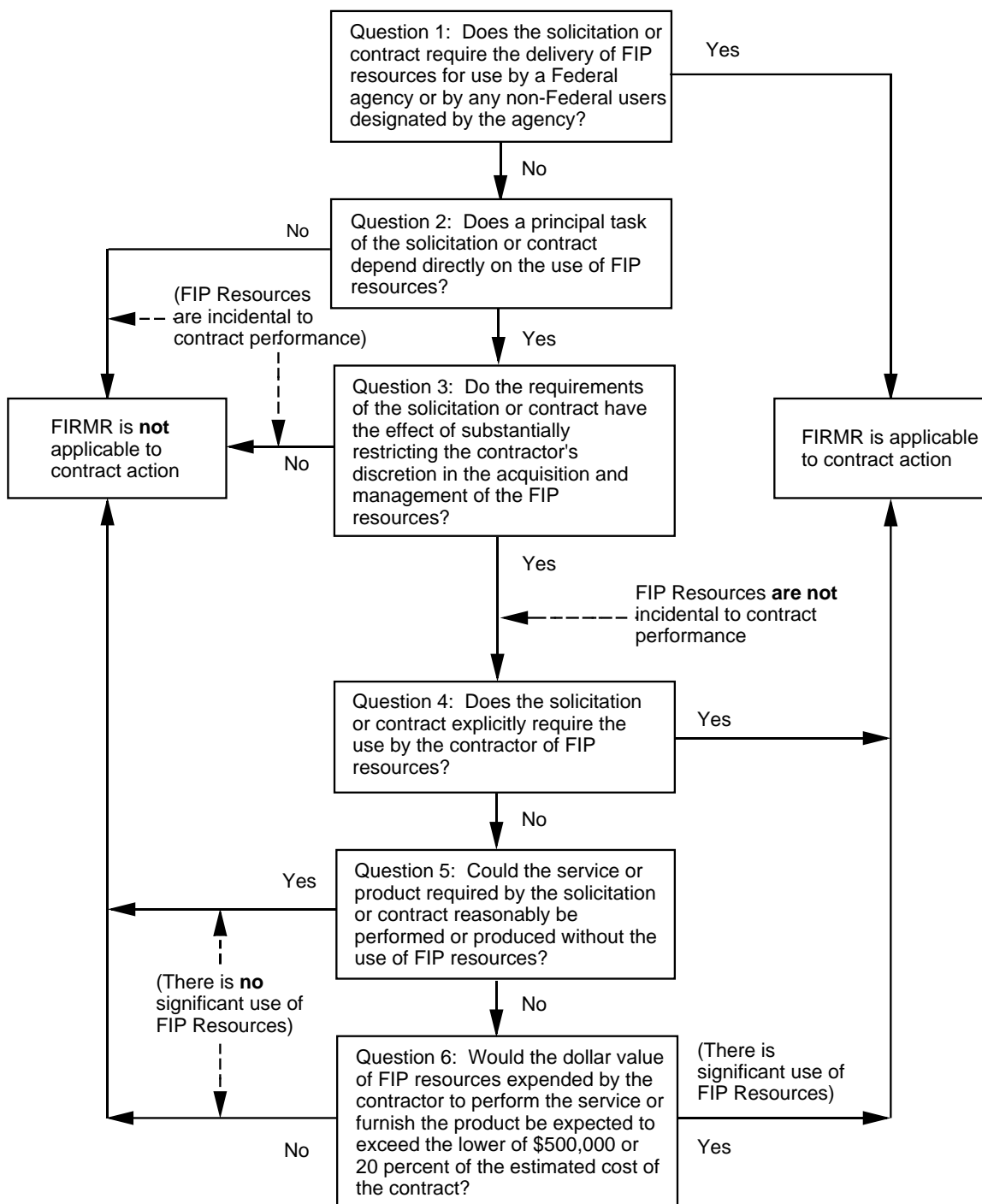
Flowchart Use: FIRMR Applicability

The flowchart on the following page will help you decide if the FIRMR applies to a specific acquisition. In most cases, you will not have to ask and answer all six questions. It only takes a few minutes to become familiar with this decision tool.

Note that you must be able to answer “Yes” to one of three questions to conclude that the FIRMR *does* apply and that *you must answer all questions in order*.

Stage 3: Applicability Test

(Chart extracted from FIRMR Bulletin A-1)



Note: Exceptions for intelligence and related activities and radar, sonar, radio, television and embedded equipment appear in the Stage 2 flowchart.

15.3 The Importance of FIRMR Bulletin A-1 *(continued)*

Examples of the Applicability Test

You can see that this flowchart is very useful. For example, if you have a requirement for integration, delivery, and installation of a supercomputer for weather forecasting by a Federal agency, the FIRMR would apply. First, you would determine in Stage 1 that you are buying FIP resources. Then in Stage 2, you would determine that no exemptions apply. Using the Stage 3 flowchart, you would make this determination:

Question	Answer	Result
Does the solicitation or contract require the delivery of FIP resources for use by a Federal agency or by any non-Federal users designated by the agency?	Yes	FIRMR is applicable to contract action. (End)

If a principal task requires the contractor to use a computer to maintain a sophisticated database, such as pension or payroll data, using specified software, you can see that the FIRMR would apply as a result of Question 4. You would determine:

	Question	Answer	Result
1.	Does the solicitation or contract require the delivery of FIP resources for use by a Federal agency or by any non-Federal users designated by the agency?	No	(continue to next question)
2.	Does a principal task of the solicitation or contract depend directly on the use of FIP resources?	Yes	(continue to next question)
3.	Do the requirements of the solicitation or contract have the effect of substantially restricting the contractor's discretion in the acquisition and management of the FIP resources?	Yes	(continue to next question)
4.	Does the solicitation or contract explicitly require the use by the contractor of FIP resources?	Yes	FIRMR is applicable to contract action. (End)

(Topic continued on next page)

15.3 The Importance of FIRMR Bulletin A-1 *(continued)*

Examples of the
Applicability Test
(continued)

If the service or product could NOT reasonably be performed or produced without the aid of considerable FIP resources, you can see that Questions 5 and especially 6 would be decisive. Using the CAD-CAM example from section 15.2 (page 15-14) of this chapter, you would determine:

	Question	Answer	Result
1.	Does the solicitation or contract require the delivery of FIP resources for use by a Federal agency or by any non-Federal users designated by the agency?	No	(continue to next question)
2.	Does a principal task of the solicitation or contract depend directly on the use of FIP resources?	Yes	(continue to next question)
3.	Do the requirements of the solicitation or contract have the effect of substantially restricting the contractor's discretion in the acquisition and management of the FIP resources?	Yes	(continue to next question)
4.	Does the solicitation or contract explicitly require the use by the contractor of FIP resources?	No	(continue to next question)
5.	Could the service or product required by the solicitation or contract reasonably be performed or produced without the use of FIP resources?	No	(continue to next question)
6.	Would the dollar value of FIP resources expended by the contractor to perform the service or furnish the product be expected to exceed the lower of \$500,000 or 20% of the estimated cost of the contract?	Yes	There is significant use of FIP resources. FIRMR is applicable to contract action. (End)

What if the
FIRMR doesn't
apply?

FIRMR 201-39.5202-1

If you decide that the FIRMR does NOT apply to your acquisition, you should **document your decision** in accordance with your agency's procedures. In addition, you should consider inserting a clause in your solicitation that is essentially the same as the clause in FIRMR 201-39.5202-1, *FIRMR Applicability*.

15.3 The Importance of FIRMR Bulletin A-1 *(continued)*

Why is FIRMR
Applicability
Important?

Determining whether the FIRMR applies, governs of your subsequent actions.

As you learned in Chapter 1, if the Brooks Act applies—which means the same thing as if the FIRMR applies—then:

- You must have authority to buy FIP resources under a delegation from GSA,
- You must follow the FIRMR when a conflict with the DFARS or your agency supplement exists, and
- Your procurement may be protested to and decided by the GSBGA.

Also, as you learned in Chapter 3, your acquisition must be planned and conducted in accordance with detailed provisions in the FIRMR. These procedures span the entire life cycle of your buy including budgeting, planning, determining requirements, analyzing alternatives, preparing solicitations and contracts, developing a selection strategy, evaluating offers, selecting contractors for award, and managing contract performance.

You will be learning about these procedures and more throughout the rest of this course.

SUMMARY

In this chapter, you learned how to determine which acquisitions are covered by the FIRMR and which are not. In the next chapter, you will learn how to compile and use market research data in preparing your acquisition plan.

CHAPTER 16

MARKET RESEARCH FOR ACQUISITION OF FIP RESOURCES

Chapter Vignette

Mark had begun to appreciate the caution that was necessary in a FIP acquisition.

“I suppose it is necessary to do really careful market research in this kind of an acquisition,” he said.

“Not just necessary,” Marcia said, “it is really critical. Careful market research is essential. Fortunately, there are several excellent sources for FIP market research and every contracting office can easily assemble and keep these sources up-to-date. Many of these are on paper, but increasingly, you can get up-to-date information electronically. There are even some private sector firms which specialize in providing and updating this kind of market research.”

Course Learning Objectives

At the end of this chapter, you will be able to:

Overall:

Use all relevant sources of information readily available within the contracting office, extract the data necessary for analyzing the requirement, and judge the results.

Individual:

- 16.1 Explain how to assemble and organize sources of information on the FIP market and what data is available from each.
- 16.2 Gather sources of information and judge the results.

Chapter Overview

Scope

This chapter provides information you will need to compile and use market research data.

Definition of Market Research

FAR Part 10.001

FAR Part 10.001 defines “market research” as *“the process used for collecting and analyzing information about the entire market available to satisfy the minimum agency needs to arrive at the most suitable approach to acquiring, distributing, and supporting supplies and services.”*

Market research is a critical part of acquisition planning. In many cases, the program office of the requiring agency will already have done considerable market research to determine sources and prices of required FIP resources. However, you must be prepared to do additional market research, as necessary, and to advise technical experts on where they can obtain sources of information for their market research.

The first section of this chapter contains information on the various sources of data on automatic data processing and telecommunications and the types of information that you can expect from each source. It explains how to assemble and organize sources of information on the FIP market and what data is available from each. It also provides points of contact for additional information.

You will find it is necessary to establish and maintain your own files on this type of information in your office files.

The second section in this chapter explains how to judge the results of your market research.

References

You should have access to the following types of references to understand the topics in this chapter, such as:

- FAR Part 10.001
 - Data Pro
 - Aurbach
 - TAURUS
 - Lexis and Nexis
 - NETMARK
 - IRMS electronic bulletin boards
 - Computer magazines
 - The Wall Street Journal
 - Telephone Directory yellow pages
 - Used equipment journals
 - WESTLAW
 - CD-ROM—Computer Select
-

(continued on next page)

Chapter Overview *(continued)*

Topics Covered in
this Chapter

This chapter includes the following topics:

SECTION	TITLE	PAGE
16.1	How to Assemble and Organize Sources of Information of the FIP Resources Market, and What Data Is Available from Each	16-5
16.2	Gathering Information and Judging the Results	16-13

16.1 How to Assemble and Organize Sources of Information of the FIP Resources Market, and What Data Is Available from Each

Introduction

This section explains how you can assemble and organize sources of information on the FIP resources market, and what type of data is available from each source, for your market research.

A key to success in market research of FIP resources is assembling, updating, and using the many available sources of information. You will find that there are literally hundreds of special books, periodicals, and other print sources on FIP information.

Some of these print sources are highly specialized and deal only with a very specific part of the FIP resource area, such as UNIX or special programming. Some are devoted to only one manufacturer's line, such as Apple's Macintosh family, or one type of product, such as laptop computers.

Other sources are more general in nature and cover a wider range of FIP resource information. You may find it useful to use the general sources to obtain general information, the "big picture," and then do further detailed research using the more specialized sources, narrowing down the sources until you have the ones which most apply to your market research needs.

In addition to print sources, another source of information is electronic bulletin boards. There are many of these, some of a general nature, and some offering highly specialized information.

Unless your office already has a very complete set of market references, like those discussed in this section, it is strongly recommended that you assemble these references. Even if your office already has many or most of these references, you should periodically inventory these references and keep them up-to-date.

The following discussions will give you examples of hardcopy, electronic, and multimedia sources.

(continued on next page)

16.1 How to Assemble and Organize Sources of Information of the FIP Resources Market, and What Data Is Available from Each *(continued)*

General Sources in the Marketplace

You can do market research either informally or formally. As with any commodity, there are some general sources that you can always expect to check informally for the FIP supplies or services. These sources include:

- Manufacturers (sometimes called Original Equipment Manufacturers or OEM)
- Dealers (generally, they distribute FIP items made by several different manufacturers)
- Distributors
- Technical publications
- Technical libraries
- Catalogs
- Lists of previous recent bidders

You can check these general sources informally, usually by telephone or FAX, without committing the Government in any way. The advantage of using informal market survey methods, such as telephones and FAX, is speed and convenience. You can use informal market research when you expect widespread competition. However, if you cannot obtain the information you need in this informal manner, you may have to use a more formal approach, issuing a sources sought in the Commerce Business Daily (CBD)

(continued on next page)

16.1 How to Assemble and Organize Sources of Information of the FIP Resources Market, and What Data Is Available from Each *(continued)*

Be Specific When
You Start

The key to efficient market research is to be as specific as possible when starting out. For example, if you are interested in market research for multi-user applications on a minicomputer, you would begin with sources that deal with that subject.

DoD Computer
Program
Information

For more information on existing service-wide FIP resource acquisitions use the following chart.

JOINT SERVICE COMPUTER PROGRAM (JSCP)			
Points of Contact			
Air Force	Gunter AFB, AL (205) 279-3520 DSN 446-3520	Army	Fort Monmouth, NJ (201) 532-7994/7917 DSN 992-7994/7917
Navy	Naval Computer and Telecommunications Area Master Station (NCTAMS), Norfolk, VA (804) 445-2568 DSN 565-2568	DLA	DLA Information Office Attn: CANI (703) 274-7506 DSN 284-7506

(continued on next page)

16.1 How to Assemble and Organize Sources of Information of the FIP Resources Market, and What Data Is Available from Each *(continued)*

Examples	The following discussions will give you examples of hardcopy, electronic, and multimedia sources.
----------	---

General Publications	The following table offers a cross section of the most common general computer publications used for market research.
----------------------	---

<p><i>Federal Computer Week</i> - a newspaper for the Government computer community, published weekly by the FCW Publishing Corp., 3110 Fairview Park Drive, Falls Church, VA 22042-4599. Subscriptions and inquiries: FCW, PO Box 602, Winchester, MA 01890-9948 or Tel. (617) 729-4200.</p> <p><i>Washington Technology</i> - Biweekly newspaper with focus on technology-intensive business issues. Published by Technews, Inc., 1953 Gallows Road, Suite 130, Vienna, VA 22182-3932. Free upon request to technology executives, managers and professionals in technology-related corporations.</p> <p><i>Government Computer News</i> - Computer industry newspaper with emphasis on Government users. Published biweekly by Channers-Ziff Publishing Associates, 8601 Georgia Ave., Suite 300, Silver Spring, MD 20910. Tel. (301) 650-2000. Subscription inquiries to Government Computer News, 44 Cook St., Denver, CO 80206-5800. Tel. (303) 388-4511.</p> <p><i>Info World</i> - Weekly newspaper billed as being for "power users of PC and networking products." Published by InfoWorld Publishing, Inc., 1060 Marsh Road, Menlo Park, CA 94025. Subscription inquiries to InfoWorld, PO Box 3014, Northbrook, IL 60065. Tel. (708) 564-0694.</p> <p><i>PC Week</i> - National computer industry newspaper. Published weekly by Ziff-Davis Publishing Co., One Park Ave., NY, NY 10016. Subscription inquiries to Customer Service Dept., PC Week, PO Box 5970, Cherry Hill, NJ 08034. Tel. (609) 428-5000.</p>	<p><i>Command and Control Microcomputer Users' Group (C2MUG) Bulletin</i> - Professional bulletin published bimonthly by the US Army Communications-Electronics Command. Provides informative articles and updated information on C2MUG services. Inquiries to Associate Director, MCS, CSE, ATTN: AMSEL-RD-SE-MCS (C2MUG), Bldg. 138, Fort Leavenworth, KS 66027-5600. Tel. 552-7550.</p> <p><i>C2MUG Software Catalog</i> - lists software programs available to units and individuals of the Command and Control Microcomputer Users' Group. Contains both military and general purpose systems, and a statement of suggested uses and users for each program, and a listing of DoD and Federal Government related groups who are distributors of public domain or military domain software. Inquiries to Associate Director, MCSD, ATTN: AMSE:-RD-SE-MCS (C2MUG), Fort Leavenworth, KS 660217-5600. Tel. AV 552-7550.</p> <p><i>CHIPS</i> - a quarterly information and experience-sharing bulletin published by the Commanding Officer, Navy Regional Data Automation Center, Norfolk, VA. Inquiries to Editor, Chips, NARDAC, Norfolk, VA 23511-6497. Tel. (804) 444-7976.</p> <p><i>Federal Computer Market Report</i> - Newsletter published twice each month with timely news and analysis of the Federal electronic procurement area, including FIP contract awards, new procurement regulations, legislation and policy changes. Free samples available on request. Published by Computer Age, 3918 Prosperity Ave., Suite 310, Fairfax, VA 22031-3300. Tel. (703) 573-8400.</p>
--	---

(continued on next page)

16.1 How to Assemble and Organize Sources of Information of the FIP Resources Market, and What Data Is Available from Each *(continued)*

FIRMR as a Reference

You should note that the FIRMR is also listed as a source of information for your market research. You can obtain information and assistance by contacting GSA at (202) 501-3194. As you have already learned, the FIRMR and FAR are now both available on a CD-ROM disk from the Government Printing Office. The use of the CD-ROM disk makes the search for references much easier and faster.

Other Print Sources

In addition to the print sources listed in the table above, there are other print sources you can assemble and use for market research, depending on your requirements. These include:

- computer magazines, such as PC World, Mac World, Mac User, and similar newsstand magazines, and catalogs;
- The Wall Street Journal, and other national newspapers, which carry articles on computer industry trends and technology;
- the telephone directory yellow pages, which provide information on available vendors in your area;
- used equipment journals, which provide information on FIP resources which may meet an agency's requirements, short of acquiring new equipment;
- corporate general announcements, which are often the first source of information on new technology;
- Government and private sector seminars, which are often very useful for a "snapshot" or recapitulation of present or projected technology and impact on the work place;
- broad agency announcements, which are useful for understanding new, leading edge technology; and
- nondisclosures with various vendors. Note: remember that any information you obtain from a potential vendor or offeror concerning new proprietary FIP technology must be handled carefully and not disseminated to a potential competitor.

(continued on next page)

16.1 How to Assemble and Organize Sources of Information of the FIP Resources Market, and What Data Is Available from Each *(continued)*

Electronic Sources You can also use certain electronic sources, such as special bulletin boards and computer networks, and CD-ROM references to obtain information.

FEDWORLD, a pilot project of the National Technical Information Service (NTIS), is a centralized electronic source for federal government information. FEDWORLD is a clearinghouse for more than 100 federally operated online computer systems and bulletin boards. It provides you direct access to these systems without knowing their telephone number, modem settings, or computer name. FEDWORLD provides information on thousands of items. You can also access individuals through e-mail on FEDWORLD. For example, you can contact someone at NIST.

Other Electronic Sources In addition, there are several other sources and networks that you should know about:

- Data Pro and Aurbach provide information or results of testing (benchmarking) for commercial FIP resources.
- Technology Acquisition Resource and Update Service (TAURUS) is an example of a very comprehensive reference updated periodically, for FIP resources acquisition available from the private sector. A single TAURUS CD-ROM disc contains:
 - ADP Schedule Checklist
 - Telecommunications Schedule Checklist
 - Blanket Purchase Agreement
 - Federal Acquisition Regulation
 - FIRMR (including temporary regulations and FIRMR Bulletins)
 - Public laws
 - OMB circulars
 - Federal Information Processing Standards Publications (FIPS)
 - Department of Defense Federal Acquisition Regulation Supplement (DFARS)
 - Navy Acquisition Procedures Supplement (NAPS)
 - DOD Freedom of Information Act (FOIA) Directive
 - NASA FAR Supplement
 - Transportation Acquisition Regulations (TAR)

(Topic continued on next page)

16.1 How to Assemble and Organize Sources of Information of the FIP Resources Market, and What Data Is Available from Each *(continued)*

Other Electronic
Sources
(continued)

-
- GSBCA protest Decisions (since 1985)
 - Rules of the General Services Administration Board of Contract Appeals
 - GSA Standard Request for Proposals (GSARFP)
 - GAO Protest Decisions
 - GAO bid Protest Regulations
 - Standards of Ethical Conduct for Federal Employees
 - Cost Accounting Standards (CAS)
 - ADP Schedules and Other Government-wide Contracts (including FTS 2000)
 - Delegations of Procurement Authority
 - Glossary of Terms
 - ADP Schedule Desk Reference
 - Federal Supply Schedule Desk Reference
 - U.S. Government Manual
 - Changes since the last disc
 - TAURUS User Manual
 - LEXIS, a service of Mead Data Central, Inc., is a computer data service specializing in information on legal decisions and legal precedents, covering federal and state court decisions and statutes, and including lawsuits and protests on acquisitions.
 - NEXIS, also a service of Mead Data Central, Inc., is a computer data service for current event information and business materials. It provides access to thousands of articles from newspapers and magazines, including developments in computers and telecommunications.
 - WESTLAW is a service of West Publishing Co. which has computer database providing information on a number of bulletin boards concerning FIP resources. For example, you can access information on the “Business Software Database,” the “Buyer’s Guide to Micro Software,” “Claims/Patents,” “Computer News,” and the FARs.
 - On-Line Schedule System Bulletin Board is the new GSA database for the Multiple Awards Schedule (MAS). It offers information on more than 150,000 items from over 400 vendors, including many FIP resource products and services.
-

(continued on next page)

16.1 How to Assemble and Organize Sources of Information of the FIP Resources Market, and What Data Is Available from Each *(continued)*

Special Sources

Finally, you can also obtain information about special kinds of FIP resource problems by contacting agencies that specialize in that kind of information. In some cases (depending on the nature of the acquisition), this might be the “first stop” to obtain data. These special sources include:

- Federal Data Processing Centers in other agencies
 - Office of Technical Assistance (OTA in GSA) for contract services program, FEDSIM, and information on access for the disabled employee. However, many FIP resource contracts are managed by the GSA Regional Offices. FIRMR Bulletin C-9 has a list of these sources
 - Washington Interagency Telephone Service (WITS—for information on telecommunications). WITS is only for local telecommunications. For long-distance, contact the FTS2000 service oversight program office. SOC-A (AT&T) Vienna, VA 703-760-7400 or SOC-B (Sprint) Herndon, VA 703-904-2800.
 - FEDLINK (in the Library of Congress)
-

16.2 Gathering Information and Judging the Results

Gathering Information and Judging Results

Once you know where and how to get started in market research, you must gather the market information that you need to make judgments about the FIP resource acquisition.

Remember, a key to success in market research of FIP resources is assembling, updating, and using the many available sources of information.

Procedure for Market Research

The following table shows the steps that you should follow in conducting market research.

Step	Action
1 Check the Requirements in FAR Part 8	<p>The FAR lists the priority for satisfying requirements for supplies and services as follows:</p> <p><i>If the requirement is for supplies, these priorities are:</i></p> <ol style="list-style-type: none"> 1. Agency inventories 2. Excess from other agencies 3. UNICOR (Federal Prison Industries) catalog items. 4. Procurement Lists of the Committee for Purchase from the Blind and Other Severely Handicapped. 5. The GSA Stock Program and other Government stock supply sources, including the Defense Logistics Agency, Military Inventory Control Points, and the Veterans' Administration. 6. Federal Supply Schedules. (There are a few supply items covered on the Federal Supply Schedules.) 7. Nonmandatory (optional for use) FIP Schedules. 8. Commercial (open market) sources. <p><i>If the requirement is for a FIP service, the priorities are :</i></p> <ol style="list-style-type: none"> 1. Procurement Lists of the Committee for Purchase from the Blind and Other Severely Handicapped. 2. Federal Supply Schedules and Mandatory GSA Term Contracts for Personal Property Rehabilitation. 3. Nonmandatory schedules and optional GSA Term Contracts. 4. UNICOR (Federal Prison Industries) Catalog (example: data entry services).

(Procedure continued on next page)

16.2 Gathering Information and Judging the Results *(continued)*

Procedure for Market Research (continued)

2 Check Current Assets	You should check for redistribution of current assets in your organization. The DSO must certify that there are no current FIP assets to satisfy the requirement. If there are current assets then those should be used in lieu of a procurement action.
3 Check the Assets of Your Own Organization	You should check for reutilization of current assets in your organization. The requiring activity must certify that there are no FIP assets to satisfy the requirement within the organization.
4 Check Assets in Total Federal Government	You should look in the total federal government for reutilization of current assets. The requiring activity must certify that there are no FIP assets to satisfy the requirement within the federal government.
5 Begin the Market Research	<p>If you are not able to meet the requiring agency's minimum requirements through agency excess, Government excess or the use of small purchase procedures (including the Government credit card), you must proceed with market research.</p> <p>Use Correct Identification. Fortunately, market research is not difficult, but it can be time consuming. Make sure that you have the correct information, such as the correct item descriptions, before beginning market research</p> <p>Use of Telephone and Fax. You can do much of the necessary market research by telephone and facsimile (Fax). If you use a fax to contact potential offerors, you have the advantage of receiving a printed (hard) copy. The disadvantage of using the fax instead of the telephone is that you cannot ask immediate follow-up questions. So, if you use the Fax to obtain market information such as prices from various potential vendors, be careful about the language that you use in your Fax inquiry and the information that you request.</p>

(Step 5 continued on next page)

16.2 Gathering Information and Judging the Results *(continued)*

Procedure for
Market Research
(continued)

<p>5 Begin the Market Research (continued)</p>	<p>The following is an example of what you could say to Vendors who are called for Market Survey pricing:</p> <p><i>"I am Mr./Ms. _____ from _____ (your organization) and I am calling for informational pricing for the following items. This is not to be considered as a requirement of the Government nor is it to be considered as a contract."</i></p> <p>After you have told the vendor what you would like informational prices on, repeat:</p> <p><i>"Again, this is not a requirement of the Government and is not a contract."</i></p> <p>If a vendor calls and asks if you have any requirements which they can bid on, you should say:</p> <p><i>"I am not authorized to release that information, please call our Acquisition Office at (703) 756-7599."</i></p> <p>Updating Sources. If you frequently acquire FIP resources, you probably already have a listing of qualified potential offerors and vendors. You must systematically review, update and file the information available from the many sources, because, this information is for a high technology field, and it quickly becomes obsolete. <i>For example, information on popular software that is more than one year old is almost certain to be outdated.</i></p> <p>Also, it is not necessary to keep most monthly computer magazines more than six months. Many of them provide a year end or annual summary issue or buyer's guide which summarizes all the developments during the preceding calendar year, along with updated commercial list prices.</p> <p><i>Be careful about using price or cost data from a reference which is more than several months old.</i> Unlike some commodities, there is intense price competition in many areas of FIP resources, and if you rely on an outdated reference for market research, you may be <i>overestimating</i> costs.</p> <p>You can contact potential offerors by telephone to obtain estimates of price/cost. However, you should not compare a valid written cost from one potential offeror or vendor against a verbal or telephone estimate from another. Remember pricing/cost is not the only issue. Availability is also important based on your procurement. Availability and compliance with the functional requirement is also needed.</p>
--	---

(Step 5 continued on next page)

16.2 Gathering Information and Judging the Results *(continued)*

Procedure for
Market Research
(continued)

<p>5 Begin the Market Research (continued)</p>	<p>Providing Unfair Advantages. You must also be careful, during your market research, not to make any remarks or comments which might provide unfair advanced information about the proposed acquisition to a potential offeror.</p> <p>Advantage of On-line Sources. One advantage of on-line sources, such as bulletin boards and electronic data bases, is that you can often obtain more current and up-to-date information, including price and cost data, through electronic sources, whereas print references may be outdated.</p> <p>Use Several Sources. Use several sources whenever possible, rather than relying on a single source, such as only one magazine. Usually, it will be possible for you to cross check and verify supplies, services and estimated cost data by using several qualified sources.</p> <p>Judging Results. When you have obtained data from market research, be careful in judging the results. First, you should be confident that the market research data was obtained from <i>reliable and recent</i> sources. Unless the sources of information are fairly recent and up-to-date, the market research data may not be reliable.</p> <p>One problem with the market research data provided by a requiring agency is that it may be incomplete, or obsolete, especially if several months have elapsed since the market research was performed and the original data assembled.</p> <p>For example, if you relied on market data that was six months or more old, you might be making a serious mistake, because newer data might differ significantly from the original market data.</p> <p>Cross Check the Results. Cross check the results of your market research, by comparing the data that you obtain from the several sources. <i>Make sure that you are comparing like with like, not “apples with oranges.”</i></p> <p>For example, if you research FIP products with some OEMs, you will find that the cost of the product may include advice on installation and set-up, as well as certain warranty services and return privileges. On the other hand, if you research the same product from a telephone warehouse retailer, you may find that while the acquisition price is lower, there may be no warranty or installation assistance offered and all sales may be final, with no return of merchandise.</p> <p>It is useful to document the results of your market research in a matrix or table format, so you can compare the prices and conditions stated by the various potential sources.</p>
--	---

(Procedure continued on next page)

16.2 Gathering Information and Judging the Results *(continued)*

Procedure for Market Research (continued)

<p>6 Document Your Results</p>	<p>The next step, once you have completed market research, is to document the results. Remember, you should document information such as:</p> <ul style="list-style-type: none"> • the number and kinds of potential sources or offerors; such as interagency agreements, IRMS schedule contracts, or the market. • any special conditions that may apply (for example, did the sources indicate that the FIP products(s) may soon be outdated or soon go out of production?); and • the likely cost or price of the FIP resources required. <p>Compare Results With Earlier Data or Earlier Acquisitions for Similar Requirements. You should compare the results of your market research with any such previous data that may have been provided by the requiring agency. You may find a considerable difference, especially if there has been a change in conditions and costs over time. For example, unlike some commodities, the cost of some FIP resources such as desktop computers has been declining in recent years. <i>Use the latest data.</i></p> <p><i>Note: This information can be used for your J&A to document previous procurement history in your attempts to foster competition.</i></p>
<p>7 Identify the Best Type of Source</p>	<p>The final step is to identify the best source for meeting the requirement. Of course, your decision will depend on the nature of the acquisition. You might select the best source from:</p> <ul style="list-style-type: none"> • available excess in other agencies • interagency agreements (such as for use of computer time on another agency's computer) • IRMS Schedule Contracts operated by GSA • the market

(continued on next page)

16.2 Gathering Information and Judging the Results *(continued)*

Procedure for
Market Research
(continued)

You can use the decision table below to help you select the most appropriate source for meeting a requirement.

If...	Then...
The requirement can be met from existing excess FIP resources in the agency or another federal agency	This is the least expensive and most advantageous source
The requirement can be met by purchase from GSA schedules for FIP resources	This is more advantageous and usually cheaper than solicitation and negotiated acquisition on the open market only if GSA price is less than your market research indicates.
The requirement CANNOT be met from existing Government excess stocks NOR from GSA schedules	Select the open market as the only remaining alternative and proceed with development of the solicitation

Once you have completed and documented the results of your market research, you can use this information for preparation of your analysis of alternatives.

SUMMARY

In this chapter, you learned how to assemble and use relevant sources of information to gather data for analyzing the acquisition requirement and, then, to judge the results of your analysis. In the next chapter, you will learn how to gather data concerning governmental and commercial market trends, and to predict how downsizing, reduction in force and rightsizing may affect the acquisition process.

CHAPTER 17

CURRENT TRENDS IN ACQUISITION OF FIP RESOURCES

Chapter Vignette

“I understand the sources for FIP market research,” Mark said. “I can understand why it is advisable to keep the sources of FIP market research up-to-date in the contracting office. I know just from reading the newspapers that the price of computers, generally, is coming down. Is that true for other aspects of FIP resources too?”

“It is true that the price of many desk top computers has decreased dramatically,” Marcia said. “However, you will find that not all the price trends are down. For example, you might learn that some software, comparatively, is getting more expensive, as it gets more elaborate. It is important to learn the factors and trends that affect market prices. There are also certain trends in the Government’s buying practices that you should know. This is a very dynamic and changing field, so let’s look at some of the trends.”

Course Learning Objectives

At the end of this chapter, you will be able to:

Overall:

Gather data relating to current trends for FIP resource acquisitions.

Individual:

- 17.1. Explain how changes in market and technological trends can affect market research, and thus the acquisition process.
- 17.2. Predict how downsizing, reduction in force (RIF), and rightsizing may affect any or all of the following situations:
 - Government trends:
 - Technological product changes and forecasts
 - The user's level of technical knowledge
 - Problems and issues based on contract history
 - Commercial trends:
 - Trends in market prices
 - Factors that affect market prices
 - Trends in buying/selling practices
 - Commercial/Government discount practices
 - Commercial and Government warranty practices
 - Other terms/conditions for commercial/Government acquisitions

Chapter Overview

Scope

As you research FIP resources, you will find that there are several trends occurring in FIP resource acquisitions. These trends are occurring in the FIP resources market and in the wider area of FIP resources technology and they can greatly influence your actions and decisions in market research for FIP resource acquisitions.

Although it is nearly impossible to predict the next major breakthrough in FIP resources technology, it is possible to chart the trends and to obtain a consensus among most experts on the most likely direction of these trends over the next several years. Some of the more important trends are discussed in this chapter.

Topics Covered in this Chapter

This chapter includes the following topics:

SECTION	TITLE	PAGE
17.1	Data Relating to Current Trends for FIP Resource Acquisitions	17-4
17.2	Technology Trends, Market Research and the Acquisition Process	17-8
17.3	The Effects of Downsizing, Reductions in Force and Rightsizing	17-12
17.4	Commercial Trends	17-15

References

In order to understand the discussion in this chapter, you should have the following references:

FIRMR 201-24.101
 201-20.203

DFAR 210.002

17.1 Data Relating to Current Trends for FIP Resource Acquisitions

Trends

As you have already learned, market research is essential in a FIP resource acquisition, because technology is advancing very rapidly and you must research what is available in order to identify advantageous alternatives to a Government requirement.

Consider the following data concerning FIP resources:

- Data processing capability is increasing while the cost of computing (in both relative and absolute terms) is coming down
- Computers are doubling in power about every four years or less
- It is now theoretically possible to connect any two people in the world by computer and to exchange information

Technology is also showing trends in continuing miniaturization and merging electronic technologies into a single piece of equipment.

Continuing Miniaturization

Probably the most obvious trend is continuing miniaturization. The size of computers and critical components, such as storage devices, continues to shrink as technology advances. Recall how much of the work that could only be done on large, room-sized mainframe computers several years ago can now be done routinely on desktop micro computers and laptops, more cheaply and with little loss of speed.

This does not mean that large main frames will disappear. They are becoming more powerful and faster and will be needed for very large scale computing tasks, such as weather forecasting, aircraft design, defense and scientific computations which require enormous computing power. A new class of *massively parallel* supercomputers is developing to fill these highly specialized requirements.

Meanwhile, entire new classes of smaller computers have been introduced, such as “laptops,” “notebooks,” “subnotebooks,” and “palmtops.” These new computers make it possible to carry out computing tasks away from the office and the main frames that dominated the previous era of computing.

(Topic continued on next page)

17.1 Data Relating to Current Trends for FIP Resource Acquisitions *(continued)*

Continuing Miniaturization (continued)

This trend toward increasing miniaturization includes Personal Computer Memory Card International Association (PCMCIA) standards and the “Personal Digital Assistant (PDA).” The PDA is a notebook or laptop sized computer that will offer the following features:

- easy portability, with very little weight (usually less than several pounds);
- most common functions and programs available on desk top computers, including word processing, graphics, data base access, and spreadsheets;
- handwriting recognition (with automatic conversion to “typed” fonts);
- voice recognition for at least partial “hands off” operation;
- interface with telecommunications networks through telephone, fax, and television links; and
- relatively fast and cheap conversion to new or added functions through the use of “PCMCIA cards” inserted by the user.

The result of this revolution in miniaturization is the ability to “take the office anywhere,” or conduct business from any location and connect to any other location.

The introduction of the Personal Digital Assistant (PDA) promises to provide virtually unlimited freedom to compute and communicate through text, video, and Fax from any point to any other point in the world and access virtually any data base through “electronic highways” via modem.

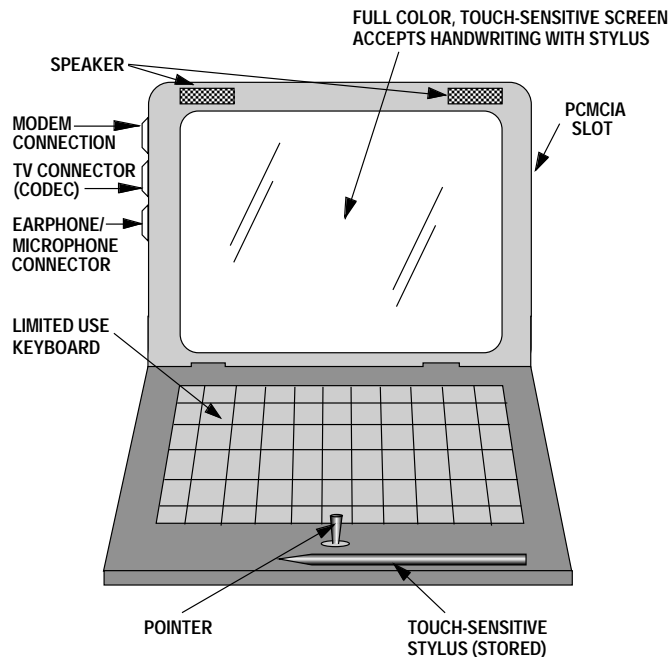
This decrease in computer size has made it possible for non-experts to perform many of the computer-related functions, such as data base manipulation, that previously were done only by programmers and data base managers. Main frames are increasingly replaced by LANS and smaller computers. As this trend continues, thousands of highly skilled programmers and systems managers are finding there is less demand for their services and they must retrain.

(continued on next page)

17.1 Data Relating to Current Trends for FIP Resource Acquisitions^(continued)

Example of PDA

The following shows a generic example of a PDA.



PCMCIA

One development that promises to offer the greatest increase in computing flexibility and miniaturization is the advent of the Personal Computer Memory Card standards, developed by the Personal Computer Memory Card International Association (PCMCIA). The PCMCIA is an international consortium of more than 300 manufacturers.

The PCMCIA standards will allow a user to plug any manufacturer's PCMCIA peripheral, such as a modem or printer, into any notebook computer, or desktop computer, using a plastic card about 2.1 by 3.4 inches (approximately credit card size), but of varying thicknesses, and a 68-pin conductor.

The PCMCIA cards will allow a user to instantly add capabilities such as sound, increased hard drive storage, CD-ROM controllers, LAN adapters, and other capabilities.

New input devices, such as pen computing, scanning and voice recognition, make it ever easier for even handicapped workers to use these new smaller computers.

(continued on next page)

17.1 Data Relating to Current Trends for FIP Resource Acquisitions *(continued)*

Merger of
Technologies

Another trend concerns the *merger of technologies*. Although we think about computers, television and telephones as separate technologies, many experts already believe this is obsolete thinking, because the three technologies are merging into one multimedia technology. Telecommunications experts predict that many office workers will soon make most telephone calls routinely through the computer, using a mouse, voice recognition, or other selection device to “dial” numbers.

17.2 Technological Trends, Market Research and the Acquisition Process

Introduction

This section discusses how changes in market and technological trends can affect your market research, and thus affect the FIP resource acquisition process.

Trends in Technology

There is consensus among most experts that certain trends in technology will continue for the foreseeable future. These trends in technology, in turn, will affect the Government's acquisition process for FIP resources. The most prominent of these trends are:

1. Preference for Commercial Off-The-Shelf (COTS) items
 2. Connectivity and Compatibility (Open systems)
 3. Shortening of the development cycle
-

Preference for COTS Items

One major trend in Government acquisition is the preference for commercial, off-the-shelf (COTS) items. It is now Government policy, whenever possible, to acquire those items which are already developed and commercially available. This is always cheaper than buying custom-made or "developmental" items.

At one time, nearly all FIP resources acquired by the Government were one-of-a-kind or developmental items. Therefore, the Government had to pay the high costs of development and testing. These costs added greatly to total acquisition costs.

FIRMR 201-24.203

Now, however, the Government prefers to buy nondevelopmental and COTS items and services to avoid developmental costs whenever possible. In addition to avoiding developmental costs, the Government is provided:

- open systems architecture, and
- a broader commercial competitive environment

Some types of FIP supplies and services are even mandated. For example, FIRMR 201-24.101 explains mandatory-for-use requirements for the FTS 2000 contracts (telecommunications).

(Topic continued on next page)

17.2 Technological Trends, Market Research and the Acquisition Process

(continued)

Preference for
COTS Items
(continued)

FIRMR 201-20.203

DFAR 210.002

FIRMR 201-20.203 explains certain “mandatory-for-consideration programs” and requires agencies to consider and use these programs (when requirements can be met).

DFAR 210.002 explains the Government’s preference for nondevelopmental items for DoD acquisitions. On occasion some developmental items may be required, however, COTS items are preferred.

Integration of
COTS with
Developmental
Items

In some cases, it may be necessary to integrate COTS items with a developmental item in a FIP resources acquisition in order to meet a special agency requirement. For example, consider a situation where a defense agency has a very special security requirement to limit access to a new computer LAN. In this case, the acquisition might include a developmental security software item that would be part of the overall LAN acquisition. Meanwhile, the remaining components of the LAN acquisition (hardware, cabling, servers, computers, printers, scanners, and some software) could well be COTS items.

If this happens, you must be careful to recognize which components will be developmental and which can still be acquired as COTS, in order to hold down costs and foster competition.

Connectivity and
Compatibility

A second trend is increasing *connectivity*. Only a few years ago, it was very difficult to get computers from different manufacturers to communicate and share information. It is now increasingly easy and will soon be routine to link computers made by different vendors and even with different operating systems, to communicate and share text, graphics, data bases, and video. *Thus, connectivity and compatibility have increased.* It is now Government policy to acquire “open” hardware systems that can be easily connected to, and used with, hardware from other manufacturers.

This connectivity is becoming so pervasive that it is transparent or seamless to the user. It may soon make almost no difference which computer brand the user has purchased, because the connectivity to other computers is becoming a *de facto* standard feature.

(continued on next page)

17.2 Technological Trends, Market Research and the Acquisition Process

(continued)

Access to Far-Ranging Sources of Information

One aspect of increased connectivity that is exploding is the increased access to far-reaching sources of information through electronic bulletin boards, on-line services and data networks. For example, the explosive increase in Internet is expected to continue as the so-called “information highway” becomes a reality. Internet is really a “network of networks.” It was originally created for the DoD to permit scientists and researchers to exchange information by computer. Internet is now open to anyone, anywhere in the world, with a computer and modem. Some experts predict an amazing 17% per month growth of traffic as new users access Internet.

It is now possible, through a laptop computer, to access enormous varieties of information on many data bases, from virtually any location through the telecommunications networks.

(continued on next page)

17.2 Technological Trends, Market Research and the Acquisition Process

(continued)

Shortening the Development Cycle

A third trend that may have a great impact on the Government's statement of requirements is the shortening of the development cycle for many commercial product developments, especially in software.

Technology is advancing very rapidly, and the early exploitation of new technology is now a "life and death" matter to many offerors. The market pressures of competition therefore encourage offerors to rush new, superior products to market as soon as possible, and to improve or upgrade these products to differentiate them from competitors' products.

For example, for some application software developers, the goal is now to produce a new version of software, such as an improved graphics or word processing program, within three months.

You can see that this is much shorter than the Government's normal cycle for development of an acquisition. The danger here is that the Government may constantly be running behind in some acquisitions as the available products exceed written specifications and requirements.

You must remain aware of the shortening of the development cycle as you conduct market research, so you can advise the requiring agency NOT to ask for yesterday's technology. This is especially true in software.

17.3 The Effects of Downsizing, Reductions in Force and Rightsizing

Effects of Downsizing, RIF, and Rightsizing

One of the major effects of the computer revolution has been impact on the labor force. At various stages, the computer has eliminated some jobs, changed others, and opened up new jobs that did not exist before.

The elimination of job positions is often referred to as “downsizing,” “reductions in force (RIF),” or “rightsizing.” These reductions in personnel strength in the private and public sectors can be caused by market pressures, such as competition, reduced budgets or changes in requirements, but also by huge gains in productivity made possible by computers.

For example, personal computers have made it possible to eliminate tens of thousands of typists in offices as technical and management personnel learned to use computers for word processing.

Tens of thousands of graphic artists and draftsmen have also seen jobs eliminated and changed with the advent of computer graphics and desk top publishing.

The substitution of main frame computers by LANs, client server networks, and stand alone microcomputers has eliminated thousands of programmer and computer specialist positions. This has had the side effect of also eliminating much FIP resource expertise in many offices, at a time when the changes are remarkable. Fortunately, the overall level of knowledge about many FIP resources is rising, as newer workers, familiar with computers, enter the Government work place.

All these changes have had an effect on both the Government and the commercial sector.

Government Trends

One result of all the changes in the market place and technology trends is the impact on the Government’s market research and the acquisition process. The effects of downsizing, RIF and rightsizing concern Government market research and acquisition in three areas:

- Technological product changes and forecasts;
 - The user’s level of technical knowledge; and
 - Problems and issues based on contract history.
-

(continued on next page)

17.3 The Effects of Downsizing, Reductions in Force and Rightsizing *(continued)*

Technological Product Changes and Forecasts

As mentioned earlier, the rate of technological change is enormous. New hardware and software products appear so quickly that it is difficult even for experts to stay abreast of all the changes. Because it is so difficult to keep up with the available new technology, and forecasts of arriving technology, it is now more important than ever that market research be thorough and up-to-date.

In fact, if you are a contract specialist who does frequent FIP resource acquisition, market research must now be an almost constant activity because technology is advancing so rapidly.

One result of all these changes is the absolute necessity for the using agency to accurately describe its needs in a timely manner, using *good performance standards*, to allow for an advantageous acquisition.

However, you cannot begin the market research without a clear understanding of the using agency's requirements. In those cases where the using agency CANNOT clearly specify its requirements, you may have to assist the agency to refine requirements until they can be used in the acquisition process.

(For a more detailed discussion of market research, see Chapter 16, "Market Research for Acquisition of FIP Resources.")

One way you may be able to help a using agency is to assist it in understanding what FIP resources are available as *Commercial*, *Off the Shelf* (COTS) products. A great majority of the FIP resources that most agencies require may already be available commercially, but a requiring agency may not be fully aware of what is commercially available.

If this is the case, the agency may OVERSPECIFY the requirements, causing the Government to acquire FIP resources that are one-of-a-kind, or too expensive, or require unnecessary development at Government cost.

User's Level of Technical Knowledge

You will find that the user's level of technical knowledge may vary greatly. Some agencies will have numbers of personnel who are very conversant with all aspects of FIP resources. However, some smaller offices and agencies may not have such personnel available and you should determine if the agency needs assistance to develop the requirements, the specifications and the Acquisition Plan.

(Topic continued on next page)

17.3 The Effects of Downsizing, Reductions in Force and Rightsizing *(continued)*

User's Level of
Technical
Knowledge
(continued)

Reductions in Force may also affect an agency by drastically reducing the user's level of technical knowledge in a given office or agency. In most cases, the responsible program office will have sufficient expertise to generate an acquisition plan.

In some cases, you might be able to suggest a point of contact in another office or agency who can provide assistance to fill in gaps in the user's technical knowledge.

The requiring agency may clearly explain the lack of a particular technical knowledge, but you should ask to determine if assistance is needed.

Problems and
Issues Based on
Previous Contract
History for the
Same or Similar
Items

Although it is the primary responsibility of the requiring agency to provide a thorough and timely Acquisition Plan, the persons who prepare the Acquisition Plan need to know about any *problems and issues based on contract history*.

You may be in a position to assist a requiring agency by informing them of any problems or issues that have arisen in the contract history of similar or related acquisitions. Often, the technical personnel will NOT have knowledge of any such problem areas, and may be about to repeat mistakes made earlier by the same or another agency.

Therefore, if you have knowledge of a similar or related acquisition that experienced problems, you should make this information from your contract history files known to the requiring agency.

Examples of such information might include:

- Problems defining a stated requirement;
 - Problems with a certain specification;
 - Overlooking a requirement, such as maintenance or service.
-

17.4 Commercial Trends

Impact of Commercial Trends

Commercial trends also have an impact on the acquisition of FIP resources. These commercial trends which affect market research and acquisition are:

- Trends in Market Prices.
 - Factors That Affect Market Prices.
 - Trends in Buying/Selling Practices.
 - Commercial/Government Discount Practices.
 - Commercial and Government Warranty Practices.
 - Other Terms/Conditions for Commercial/Government Acquisitions.
-

Trends in Market Prices

It is never certain that market price trends will continue, but the established trends in market prices at present are:

- *Hardware market prices are declining.* The relative long term trend for most hardware items, such as computers, printers and other peripherals is downward. This is direct result of the intense competition in the commercial market.

This is especially true in the field of microcomputers, where there are many manufacturers assembling computers which are very similar in cost and performance. The common desktop microcomputer has therefore become a mass commodity, with many offerors, and downward price pressure.

Note that this is not necessarily true of certain special hardware, such as niche, one-of-kind items where a sole producer can still charge premium prices. An example might be a highly specialized computer used for sophisticated diagnostics of jet engines.

- *Application software market prices are more variable.* Unlike hardware, the prices for widely used application software, such as word processing, is rising. That is because application software has a very short life cycle before obsolescence. The software developer/manufacturer must maximize profits in a very short time, such as 18 months, before a newer, superior version comes on the market. The Government is more frequently buying upgrades or enhancements for already installed application software.

(Topic continued on next page)

17.4 Commercial Trends *(continued)*

Trends in Market
Prices
(continued)

- *Telecommunications market prices are subject to special discounts, based on volume.* Most of the Federal Government's use of commercially available telecommunications resources is governed by the use of long term contracts, such as FTS2000. However, individual agencies may occasionally require special telecommunications services.

Factors That
Affect Market
Prices

There are several factors that affect market prices. These include the level of competition, the size of the order, and any special conditions, such as overall demand, threat of obsolescence and complexity or customization.

Level of
Competition

The level of competition affects market prices because when there are many providers (high competition), the pressure on prices will be downward. Conversely, if there are only a few providers, or only one provider (monopoly), the pressure on prices will be upward.

For this reason, it is always preferable for you to maximize competition in a FIP acquisition.

Size of the Order

The size of the order can also have an effect on prices. For example, as the largest buyer of FIP resources in the world, the Federal Government can and does demand special price consideration for large buys.

Even if there are many offerors and true competition, an offeror may be eager to land a large Government order and become the largest provider. This may enable it to greatly increase economies of scale and lower prices in the remaining commercial market, eventually driving out competition.

For this reason, it is often possible to obtain favorable terms by making an order as large as possible. You can do this by consolidating several smaller orders from one or more agencies into a large order and then negotiate a best price.

However, you **MUST** consider whether a very large acquisition will have the effect of eliminating competition.

(continued on next page)

17.4 Commercial Trends *(continued)*

Other Factors that Affect Market Prices

Of course, there are other factors that also affect market prices for FIP resources as they do for any other commodity. These other factors include the cost of money and materials prices.

- *Cost of Money*—the cost of money affects purchase prices and payment terms. In periods of relatively low inflation, credit terms are low, credit is easy and payment in lease/purchase agreements is relatively cheaper.

In periods of higher inflation, the cost of borrowing money goes up for everyone, including computer manufacturers. They, in turn raise prices to buyers.

- *Prices of Materials*—including raw materials and manufactured components (computer “chips”) also affect market prices. When new computer chips (microprocessors) are first introduced, they are sold at a premium to maximize profit. Soon, as rivals are developed and marketed, they fall in price. Since they are an expensive component in computers, the price of computers then falls also.

Overall Demand

Overall demand is also a price factor. When overall demand is very high, producers raise prices, even when there was previously competition, because each producer now thinks it can sell all the items it produces. On the other hand, falling demand usually leads to falling prices, as producers seek to reduce inventory and storage costs. The threat of obsolescence also leads to falling prices, because the manufacturer wants to sell off all items before they become worthless.

You can take advantage of this situation by timing the acquisition so that you do not have to pay a higher price or premium when an item is first introduced and the price is highest. If you can delay an acquisition, it is sometimes possible to obtain a lower price when the peak introductory price for a new item has been reduced, as the competition begins to catch up.

(continued on next page)

17.4 Commercial Trends *(continued)*

Customization and Complexity

Another factor that affects price is the degree of *customization and complexity* demanded by the customer. Generally, the greater the level of complexity or customization demanded by the customer, the greater the price. That is because the contractor or manufacturer must then provide more labor and time in customizing the order to satisfy the customer.

You must be aware of this and insist that any requirements for customization be fully justified. For example, if a requiring activity cannot use commercially available software without modification, you should explain that customization will require additional costs for programming.

Trends in Buying/Selling Practices

Another factor that you must be aware of is the trends in commercial buying/selling practices. As a result of certain conditions in the market place such as competition and early obsolescence, manufacturers, and other contractors adopt pricing strategies to remain competitive, reduce risk and maximize prices.

These strategies have led to the following trends in buying and selling practices:

- “Bundling” of Hardware and Software
 - Leasing of Software
 - Expandability and Upgrades
 - Decreasing Dependence on the Original Manufacturer
-

“Bundling”

Bundling is when a vendor offers a hardware system which comes fully loaded with software. Or, the vendor may offer computer hardware bundled with a maintenance program, special leases or other services.

Bundling is an effective sales tool because it makes it possible to acquire additional software or services as part of a “package” at lower cost than if the components of the package were acquired separately.

However, bundling is often NOT in the Government’s interests because the fully loaded software, maintenance, leases or other features offered by the vendor may not be what the users need, or may duplicate what is already available from other sources or existing contracts. For example, if the Government already has a software package in use that meets all requirements, there is no need to acquire additional bundled software, even at reduced cost, just because it is part of the vendor’s offer.

(continued on next page)

17.4 Commercial Trends *(continued)*

Leasing of Software

Unlike the offerors of hardware, *software developers prefer to lease, rather than sell*, their application software products.

The reasoning behind this practice is that there are two major problems in the vending of software.

- *Piracy.* The first major problem in commercial software vending is piracy. Popular application software is copied and used illegally on a massive scale throughout the world, in spite of the best efforts of the Software Publishers Association to collect damages and prevent the practice.

Software developers are concerned that if they sold rather than licensed their application software products they would have even less control over piracy.

- *Early obsolescence.* The life-cycle for software is shorter than for hardware or telecommunications services. The software developer must maximize profits as quickly as possible, usually within a 12-18 month period, before a competitor offers the best features of his/her application software.

By leasing (right of use), rather than selling, the software developer retains some legal protection against copying the desirable features of the application software package.

Importance of Market Research for Software

You should therefore be aware that the market research is especially important for commercial software acquisitions. (See Chapter 12 for more information on commercial software.)

Expandability and Upgrades

One buying and selling practice that is on the increase is the offer of expandability and upgrades. Since technology is advancing so quickly, many buyers are reluctant to buy the latest and most expensive technology, because they fear it will soon be obsolescent.

In order to overcome this buyer resistance, vendors increasingly offer expandability and upgrades at a discount. Under this strategy, the vendor will provide new capability and performance upgrades, such as increased memory storage or improved software, over a specified period, such as 48 months.

(Topic continued on next page)

17.4 Commercial Trends *(continued)*

Expandability and Upgrades (continued)

The buyer receives assurance that the equipment or software will be periodically updated at lower cost, extending the system's life. The seller attempts to capture the buyer's business for a longer period, reducing the risk that the buyer will buy a new product from a competitor.

From the Government's point of view, it may or may not be desirable to enter into such a contractual agreement. It will depend on your judgment, and the terms, conditions and requirements at the time.

Decreasing Dependence on the Equipment Manufacturer

One trend that is strongly encouraged in Government acquisitions of FIP resources is decreasing the dependence on the original equipment manufacturer (OEM). In the earlier days of computing, the Government was dependent on all types of services, such as training and maintenance, from the OEM, because there was really no other qualified source.

As a result of this near monopoly, the OEMs were able to charge premium prices for such services as system operation, maintenance and training. Fortunately, there are now more offerors who can provide many of these services, often at prices lower than the OEMs.

You are therefore encouraged by the Government to consider the use of other sources than the OEM for all types of supplies and services, as long as this does not violate any terms, conditions or warranties of existing contracts with the OEMs.

Commercial/ Government Discount Practices

Another commercial trend that you should be aware of concerns commercial and Government discount practices. All large buyers of commodities normally demand special discounts, based on the size and volume of their purchases. Generally, the larger the order, the greater the discount that the buyer can demand.

(Topic continued on next page)

17.4 Commercial Trends *(continued)*

Commercial/ Government Discount Practices (continued)

The federal government routinely insists on special discounts for purchases and encourages agencies to consolidate their requirement, as appropriate, in order to obtain the best available discount rates based on volume. Unlike commercial buyers, the Federal Government can also insist on the very best price offered to any buyer.

However, you should be aware that some vendors, especially software companies, refuse to provide the detailed pricing data required by the GSA and have kept their products off the GSA schedules.

Commercial/ Government Warranty Practices

Another commercial trend you should be aware of concerns commercial and Government warranty practices. Vendors typically offer warranties which promise compliance with certain design and performance specifications and promise to repair or replace the purchased item as long as certain conditions have been met by the buyer.

The trend has been for the Government to buy off-the-shelf commercially available FIP resources, including available warranties.

Definition of a Warranty. A commercial warranty is a written guarantee of the integrity of a product and of the maker's responsibility for the repair or replacement of defective parts (in the case of hardware) or the entire product (such as an application software package).

Warranty Costs. The costs of honoring warranty demands have been carefully calculated by the seller and are part of its price. For example a manufacturer knows how often a certain part can be expected to fail, during the life-cycle of a product, so the manufacturer calculates the probable cost of replacing that part and includes it in the price quoted to the buyer.

(Topic continued on next page)

17.4 Commercial Trends *(continued)*

Commercial/
Government
Warranty
Practices
(continued)

Typically, the seller attaches a *time limit*, such as one year from registered date of purchase, to accept claims against the warranty. Any claims made after the registered expiration date will not be honored.

In return, the buyer is required to use the product only in the manner in which it was intended. If not, the warranty is normally void.

Contracting
Officer's
Warranty
Responsibilities

If you are a contracting officer for a FIP acquisition, it is your responsibility to determine the most advantageous warranty terms possible for the Government, and later to ensure the Government complies with the terms of the warranty during the contract administration phase. For example, you would not want a commercial warranty that is too restrictive for the Government's purposes and needs.

During the market research, you should also research the relative advantages and disadvantages of different offerors' warranties. You will probably find that most warranties tend to be similar, but occasionally, you may find an offeror has a high degree of confidence and offers very favorable conditions, or that you may be able to negotiate more favorable terms and conditions.

For example, based on the large volume of the Government acquisition, you may be able to negotiate:

- A warranty period longer than the seller normally provides to other commercial customers; or
 - Warranty coverage for parts which are NOT normally covered by warranty; or
 - A price reduction, if the Government decides NOT to take the standard warranty offer.
-

(continued on next page)

17.4 Commercial Trends *(continued)*

Current Suppliers	<p>The list of current suppliers for FIP resources now includes a large number of OEMs, dealers and third party vendors who also sell to the general public. Many vendors supply popular products on GSA nonmandatory FIP schedules. Examples include IBM, COMPAQ, Apple, Microsoft, BORLAND and other well-known makers. Many vendors establish a federal marketing division to concentrate on sales to federal agencies, or on a special niche, such as defense applications.</p> <p>Many of these vendors offer FIP equipment that is basically comparable in overall performance. However, you should always be cautious about software. Avoid getting committed to proprietary software and noncompetitive software agreements.</p> <p>Also, you should check potential suppliers for:</p> <ul style="list-style-type: none"> • Past performance, including reliability • Market shares and special niches (Some vendors may provide only one highly-specialized product or service) • Corporate market strategies (such as trying to steer buyers into using only their software) • Patent and data rights • Distribution and support capabilities
Other Terms and Conditions for Commercial/Government Acquisitions	<p>You should also be aware that there may also be other terms and conditions which might apply to a FIP resource acquisition. A FIP resource acquisition can be very difficult and complex, for both the offerors and the Government. As a result, there has been great demand from Government agencies for some process to “streamline” FIP resource acquisitions. The intent of streamlining is to simplify an acquisition while still including any special terms and conditions that the Government requires.</p>

(continued on next page)

17.4 Commercial Trends *(continued)*

Streamlining

In response to demands for streamlining, the National Institute of Standards and Technology (NIST) has created guidelines which can be used by the requiring agency to simplify and streamline the FIP resource acquisition.

For example, if interoperability and portability are concerns, NIST has established a model request for Open Systems Environments (OSE). This model request provides sample terms and conditions that may be useful in developing a solicitation when there is concern about OSE.

The NIST may also be able to provide information and assistance on other desirable terms and conditions which a requiring agency may require for an acquisition.

Increased Use of “Best Value” Approach

FAR Part 15 FIRMR 201-39.15

Finally, you should be aware that there is increased use of the “best value” approach to source selection in FIP resource acquisitions. Because FIP resources can be very expensive and because you are required to consider total life cycle costs, it is usually more advantageous to adopt a “best value” acquisition strategy. You will recall that FAR Part 15 and FIRMR 201-39.15 provide policies and procedures for the best value approach to source selection. In addition, the GSA has published guidelines explaining the greatest value approach. Briefly, it uses a trade-off between cost and technical factors to select the most advantageous offer, rather than relying on lowest price alone. The best value approach, for FIP resource acquisition is not mandatory, but is recommended by GSA. (Note: for discussion of the best value approach, see Chapter 38, “Source Selection.”)

SUMMARY

In this chapter, you learned how to gather data concerning governmental and commercial market trends, and to predict how downsizing, reduction in force and rightsizing may affect the acquisition process. In the next chapter, you will learn to distinguish between “outdated” and “obsolescence.” You will learn to use available sources of information to determine if an item is, or will soon be, obsolete, and how to use the acquisition process to prevent FIP resource obsolescence.

CHAPTER 18

OBSOLESCENCE IN THE MARKET PLACE

Chapter Vignette

“One of the things that would concern me about FIP acquisitions is the fear that whatever I buy today will be obsolete tomorrow,” said Mark.

“Well, you should be concerned,” said Marcia. “The fact is that technology is advancing very rapidly in this area. If the Government is not careful, it can easily buy obsolete or obsolescent technology. On the other hand, if the Government tries to obtain the latest, cutting edge technology, it may end up paying a lot of money unwisely for development costs. The trick is to acquire FIP technology that is current and will remain useful for a long time, without paying too much.”

Course Learning Objectives

At the end of this chapter, you will be able to:

Overall:

Demonstrate the effect of obsolescence in the market place and in the acquisition process.

Individual:

- 18.1 Demonstrate the effect of obsolescence in the market place and in the acquisition process.
- 18.2 Define “outdated” and “obsolescence” in accordance with FIRMR Parts 4 and 20.
- 18.3 Explain the terms “outdated” and “obsolescence” based on commercial practice.
- 18.4 Use sources available to assist in the determination as to whether a requirement is for an item that currently is, or will soon be, obsolete.
- 18.5 Generalize how the acquisition process can be used to prevent FIP resource obsolescence.

Chapter Overview

Introduction

FIP resource acquisitions are especially affected by obsolescence in the market place and by changes in technology. In fact, computers, information processing and telecommunications are among the most rapidly changing technologies you will encounter in procurement.

Right at the start of any FIP resource acquisition process, you must be aware of the effects of obsolescence. For some types of complex FIP resources acquisitions, the acquisition process may take many months, enough time for the required items to become obsolete, if you are not careful. Fortunately, there are some actions you can take to minimize the effects of obsolescence in such an acquisition.

Topics Covered in this Chapter

This chapter includes the following topics:

SECTION	TITLE	PAGE
18.1	The Effect of Obsolescence in the Market Place and in the Acquisition Process	18-4
18.2	“Outdated” <i>versus</i> “Obsolescence”	18-5
18.3	“Outdated” and “Obsolescence” Based on Commercial Practice	18-9
18.4	Using Sources Available to Determine Whether a Requirement Is for an Item That Is, or Will Soon Be, Obsolete	18-10
18.5	How the Acquisition Process Can Be Used to Prevent FIP Resource Obsolescence	18-13

References

In order to understand and carry out the procedures explained in this chapter, you should have access to the following references:

- FIRM, especially Part 201-4.001, 201-203.5, 201-22.3, and 201-39.602
 - FIRM Bulletin C-2, *Disposition and Reuse of Federal Information Processing Equipment*
 - FIRM Bulletin C-27, *Reuse of Outdated Federal Information Processing (FIP) Equipment*
 - FIRM Bulletin C-29, *Acquisition of Used Computer Equipment by the Federal Government*
 - Commercial computer magazines and newspapers.
-

18.1 The Effect of Obsolescence in the Market Place and in the Acquisition Process

Introduction

This section discusses the effect of obsolescence in the market place. There is intense technological competition in the commercial production and in the marketing of FIP resources.

One result is that there is a constant danger of early obsolescence. If you are not careful during market research and acquisition, it is easy to acquire some outdated or obsolete technology which may not have a long or useful life cycle.

FIRMR 201-20.203-5

For example, FIRMR 201-20.203-5 warns that, “as part of the analysis of alternatives, agencies shall determine strategies for maintaining up-to-date FIP resources and avoiding outdated FIP resources over the system life.”

18.2 “Outdated” Versus “Obsolescence”

“Outdated”
Versus
“Obsolescence”

FIRMR 201-4.001

Quite often, people tend to use the terms “outdated” and “obsolete” or “obsolescence” as if these terms mean exactly the same thing. That is not the case. FIRMR Parts 4 and 20 provide very specific definitions of these terms. You should be aware of these and the difference between them. The FIRMR says that:

- **Outdated FIP equipment** “means any FIP equipment over eight years old, based on the initial commercial installation date of that model of equipment, and that is no longer in current production.”
- **Obsolescence** “means the state of FIP hardware or software that is either in a degenerative condition which, if not corrected, will render the resource useless, or becoming technologically outmoded compared to other hardware or software being sold.”

Examples. For example, a nine year old computer, installed and still functioning in a Federal agency, but out of production, is *outdated*, although it may still be used every day and require no substitution.

On the other hand the first commercial version of a three year old computer software that is no longer made and is not compatible with later versions and has none of their upgraded features is *obsolete*.

Use of Outdated
and Obsolete FIP
Equipment

FIRMR 201-
21.202(b)
FIRMR Bulletin C-2

It is important to understand that, just because an item of FIP equipment is outdated, does NOT mean that it is useless, or must be immediately replaced. There may be years of useful life remaining. Technological change is now so rapid that many items become outdated earlier than in previous years.

For example, many employees in both the Government and private sectors have very useful but outdated microcomputers. FIRMR 201-21.202(b) requires that agencies identify FIP resources that are out-dated or no longer needed.

Even if a Federal agency finds that an item of FIP equipment may be outdated for its purposes, that item may still be useful to other Federal agencies or activities. However, just because an item is outdated, does not mean that it is automatically excess to the agency. In fact, FIRMR Bulletin C-2, paragraph 7.b. specifies that *outdated equipment is not to be reported to GSA as excess, regardless of original acquisition cost (OAC)*.

(continued on next page)

18.2 “Outdated” Versus “Obsolescence” *(continued)*

Used FIP
Equipment

FIRMR Bulletin C-29

Also, do not confuse “used” FIP equipment with outdated or obsolete FIP equipment. FIRMR Bulletin C-29, *“Acquisition of Used Computer Equipment, by the Federal Government”* discusses used equipment. “Used” equipment is defined there as *“equipment that has been previously installed, including reconditioned, refurbished or remanufactured equipment.”*

Note that used FIP equipment is NOT necessarily outdated or obsolete FIP equipment.

Requiring
Outdated and
Obsolete FIP
Equipment

FIRMR 201-39.602-1

In those cases where an agency knowingly requires outdated or obsolete FIP equipment, the agency should first attempt to obtain such equipment through the GSA Excess FIP Equipment Program, rather than attempt acquisition from commercial sources. However, justification for outdated equipment shall not be used to perpetuate any contract for outdated FIP equipment, or for FIP equipment to be used with FIP software that requires general redesign to satisfy mission needs (FIRMR 201-39.602-1). The agency’s DSO may request an exception, if it is in the Government’s best interest.

FIRMR Bulletin C-2, *Disposition and Reuse of Federal Information Processing Equipment*, provides further details.

18.2 “Outdated” Versus “Obsolescence” *(continued)*

Determining Obsolescence

Briefly, C-27 explains 7 guidelines for determining whether a FIP equipment item is obsolete. These guidelines are summarized below.

<i>You may consider a FIP equipment item to be obsolete IF:</i>	
1.	The maintenance services or replacement parts for maintaining standard performance of the computer or telecommunications equipment are no longer commercially available from traditional sources, including the original equipment manufacturer (OEM); <i>or</i>
2.	The operating system of the FIP equipment is no longer supported by the OEM; <i>or</i>
3.	Records indicate a degradation in the reliability of the equipment and show adverse effects on the supported mission; <i>or</i>
4.	An increasingly higher portion of the overall operating costs is being applied towards the maintenance of the FIP equipment; <i>or</i>
5.	The energy consumption, including necessary environment control, is relatively high; <i>or</i>
6.	The FIP equipment is not compatible with recent and more cost-effective software enhancements such as automatic documentation, data dictionaries, coding optimizers, and extensive software libraries.
7	The FIP equipment is not compatible with recent more cost-effective hardware enhancements and newer technology such as newer model storage units, tape drives, and controllers

FIRMR 201-20.203

If one or more of the above factors applies to outdated FIP equipment, an obsolescence review should be performed to determine cost savings if new technology is acquired.

18.2 “Outdated” Versus “Obsolescence” *(continued)*

Obsolescence Review

FIRMR 201-22.3

Of course, you should NOT wait until FIP resources are obsolete before making plans for upgrades and replacements. In fact, FIRMR Subpart 201-22.3 prescribes policies for reviewing installed FIP resources for obsolescence. This requires technical personnel to perform an “obsolescence review.”

An obsolescence review is an analysis to determine whether you will obtain system life cost savings by acquiring newer technology resources, relative to continued operation of existing outdated resources. Whenever the obsolescence review leads to a conclusion that the cost of continuing operation of existing resources is greater than the cost of acquiring and operating technologically newer resources, the agency should replace the existing outdated resource.

For example, suppose an agency is operating a seven-year old mainframe computer system. This old system begins to break down more frequently and requires frequent and expensive maintenance. A newer system appears to be much faster, relatively cheap to acquire and operate and will need only half the staff to perform twice the work. In this case, an obsolescence review might show that the total cost of continuing operation on the older, installed system would be greater than the system life cost of acquiring a new system. The results of the obsolescence review might be used to support a requirement for acquisition of a new system.

FIRMR Bulletin C-27

FIRMR Bulletin C-27, *Reuse of Outdated Federal Information Processing (FIP) Equipment*, provides a listing of outdated FIP equipment and guidelines for determining whether FIP equipment is obsolescent.

Importance of Complete Documentation

In reviewing the above guidelines, you can see that it is important to keep complete documentation on the costs and difficulties of operating and maintaining an older system that you wish to determine is obsolete.

For example, the maintenance costs and any correspondence on nonavailability of replacement parts would be useful documentation.

18.3 “Outdated” Versus “Obsolescence” Based on Commercial Practice

Outdated Items In Commercial Practice

In commercial practice, there are many outdated FIP equipment items which are still available for resale. Many of these items are bought, refurbished and resold by third party vendors at greatly reduced prices.

Remember that an item of FIP equipment becomes outdated in eight years after the date of initial installation. That is several generations of computer hardware or software.

The *advantage* of acquiring outdated FIP equipment is relatively *lower cost*, because OEMs will normally drop the price of outdated equipment as soon as it goes out of production, in order to dispose of inventory.

However, the great *disadvantage* of acquiring outdated FIP equipment is that because the equipment is out of production, the OEM will no longer provide FIP support and maintenance and replacement parts may become hard to find.

For this reason, you will usually acquire such outdated FIP resources for the Government only as replacements to meet compatibility standards for on-hand FIP equipment already in an agency. This is usually an exception.

For example, if an organization required a certain type of “touch screen” computer monitors as special replacements for use in a training classroom, it might be necessary to acquire these even though they are out of production.

Obsolescence in Commercial Practice

Obsolescence is not as serious a problem in commercial practice, because of intense competition and new technology. In most cases, OEMs and vendors are under intense pressure to offer the latest technology and constant upgrades at competitive prices in order to stay in business.

However, it is still possible to acquire obsolete FIP hardware or software unless you conduct careful market research. As with outdated FIP equipment, manufacturers and vendors will often reduce prices drastically on FIP equipment as soon as it goes out of production, in order to clear inventory, before demand for that item disappears. This is often the case if the FIP equipment on sale is not compatible with the next generation to be offered.

For that reason, you must be careful NOT to acquire FIP equipment just because it is attractively low priced, unless minimum requirements are met, including compatibility and future upgrade requirements.

18.4 Using Sources Available to Determine Whether a Requirement Is for an Item That Is, or Will Soon Be, Obsolete

Requests for Obsolete Items

One of the things you must be alert for in a FIP resources acquisition is a stated requirement for an item that is, or will soon be, obsolete.

Sometimes, a requiring activity will state a request for an item which is already, or will soon be obsolete. This request may be either intentional or unintentional. In either case, you must make certain that the requiring activity understands that this is the case, and what the consequences of that request will be.

That also means that you must be able to use available resources, including the guidelines in FIRMR Bulletin C-27, to determine whether a requested FIP resource item is already, or will soon be, obsolete.

Example. For example, a requiring activity may sometimes request an item of software that has been superseded by a later release. This may happen quite frequently, either because the requiring activity did not thoroughly research the requirement and does not know the software is obsolete, or may know the software is obsolete, but considers it sufficient for their purposes. This may happen with software used for special activities, such as special data bases, design software and accounting.

However, according to the guidelines in FIRMR Bulletin C-27, the agency may be requesting an outdated or obsolete item of FIP equipment. Check the requirement against the guidelines if you are in doubt.

Estimate Remaining Years FIRMR 201-22.3

Another way that you can determine whether a requirement includes an item that is obsolete (or soon will be) is to estimate the remaining years before it becomes outdated or technologically outmoded. As you have seen *the Government estimates that an item of FIP equipment will become outdated in eight years*. In fact, FIRMR 201-22.3 prescribes policies for reviewing installed FIP resources for obsolescence. It requires agencies to replace outdated FIP resources that are no longer the most advantageous alternative for meeting requirements.

Therefore, if you receive a requirement for a FIP product (hardware or software) and your market research shows that it has not been changed for six years, you could reasonably conclude that it will be “outdated” *and technologically outmoded* in no more than two years.

Unless the vendor offers an attractive modernization program, you can see that it would probably NOT be favorable to acquire such equipment.

(continued on next page)

18.4 Using Sources Available to Determine Whether a Requirement Is for an Item That Is, or Will Soon Be, Obsolete *(continued)*

Sources Available	<p>There are many sources available to help you determine whether a requirement is for an item that is, or will soon become, obsolete. These sources include all those sources that you would normally use in doing market research. Some especially useful sources may include:</p> <ul style="list-style-type: none"> • FIRMIR Bulletin C-27, Disposition and Reuse of Outdated Federal Information Processing Equipment; • OEM press releases; • User groups; and • Commercial magazines and newspapers.
FIRMIR Bulletin C-27	<p>FIRMIR Bulletin C-27 contains guidelines to help you determine if an item is obsolete. In fact, this should usually be the first source that you check.</p>
OEM Press Releases	<p>You should also be alert for press releases and announcements by the OEM. Manufacturers often make early announcements about new releases and discontinuations, in order to impress their stockholders. These press releases are often carried in major newspapers, such as the <i>Wall Street Journal</i> and major city dailies.</p>
Discontinuations and Reductions	<p>During your research, also look for signs that the OEM will soon discontinue production of the computer or other FIP resources to be acquired. <i>One signal may be a very sharp price reduction to clear out inventory before the item becomes outdated or obsolete, or just before a superior rival product arrives on the market.</i></p> <p>Reminder: GSA nonmandatory FIP schedules include information concerning items which are no longer supported by the OEM or out of production.</p>

(continued on next page)

18.4 Using Sources Available to Determine Whether a Requirement Is for an Item That Is, or Will Soon Be, Obsolete *(continued)*

User Groups	Members of user groups often are keenly aware of developments in the FIP resources field, especially in the areas of common applications software, desk top computers and laptops. Depending on the FIP resource item you are acquiring, you may be able to obtain valuable information about pending obsolescence. There are often members of such user groups in many agency offices and they are listed in many newspapers and telephone directories.
Commercial Magazines	Those commercial magazines which specialize in computing are often an excellent source about items that will become obsolescent. In fact, these magazines are often the first to report that an item will be discontinued or offered at a discount. Most of these magazines feature a column about developments in the computing field and often announce a discontinuation many months before it occurs.

18.5 How the Acquisition Process Can Be Used to Prevent FIP Resource Obsolescence

Delaying Obsolescence

It is impossible to completely prevent the effects of obsolescence in a FIP resources acquisition. Technology is advancing so rapidly that obsolescence will eventually occur. However, it is your obligation to protect the Government by using the acquisition process to delay obsolescence.

You can do this by using certain features of the FIP acquisition process. These include:

- avoiding acquisition of FIP resources that will soon become outdated or obsolete;
 - upgrading specifications;
 - requiring a risk analysis plan in the proposal;
 - incorporation by inclusion of offeror proposal language;
 - use of a technology insertion clause; and
 - use of a “best value” acquisition strategy
-

Avoiding Acquisitions That Will Soon Become Obsolete

The first way that you can protect the Government against obsolescence is to avoid acquiring FIP resources that you know will soon be obsolete or outdated. For example, during your market research, you may learn from commercial sources, such as computer magazines, that a certain FIP equipment item will soon go out of production.

If that is the case, you should recommend that the requiring agency consider upgrading the design or performance specifications, rather than buying items that will soon become outdated or obsolete.

Of course, if the acquisition is a special case, and the requiring agency is fully aware the item(s) will become obsolescent, it may be acceptable to continue with the acquisition.

(continued on next page)

18.5 How the Acquisition Process Can Be Used to Prevent FIP Resource Obsolescence *(continued)*

Upgrading Specifications

A second way you can protect against obsolescence is to upgrade specifications. FIP resources technology improves very rapidly. For this reason, you must be sure that the specifications used for a FIP resources requirement are NOT themselves outdated. Using old or outdated specifications will lead to acquisition of outdated or obsolete FIP resources. As FIP resources rapidly improve, the Government's performance specifications must also be reviewed and upgraded to keep pace and insure that the latest technology is demanded and acquired.

Therefore, be sure that the FIP resource specifications for FIP resources are themselves not outdated, or merely copied from an old acquisition.

For example, if a requiring agency merely copied five year old performance specifications for a microcomputer, those performance specifications might be very inferior to those which are commonly available on the commercial market today.

If you have reason to believe that the performance specifications in a proposed requirement may lead to acquisition of obsolete or outdated FIP resources, you should ask that technical experts review the specifications to determine if they should be upgraded or replaced.

For a more detailed discussion on analysis of specifications, see Chapter 32, "Analyze Specifications for FIP Resource Acquisitions."

Requiring a Risk Analysis Plan in the Solicitation

A third way that you can use the acquisition process to prevent FIP resource obsolescence is to require offerors to submit a risk analysis plan as part of their proposals. If you are not sure what the risk of obsolescence is, you can require offerors to submit a "risk analysis plan" which addresses the risks of obsolescence (along with any other risks you may wish analyzed).

Then, when the offerors submit proposals, they must address possible risks of obsolescence and proposed solutions, such as technology insertion or other alternatives. The risk analysis plan thus becomes one of the factors that you must consider in the source selection process as part of the acquisition process.

(Topic continued on next page)

18.5 How the Acquisition Process Can Be Used to Prevent FIP Resource Obsolescence *(continued)*

Requiring a Risk Analysis Plan in the Solicitation *(continued)*

This strategy may be very useful if you plan to acquire a FIP resource with a long projected life cycle, or high risk of early obsolescence.

Remember, if you require a risk analysis plan as one of the requirements in the offerors' technical proposals, you must develop appropriate evaluation factors to evaluate the risk analysis plans and ensure you have technical evaluators who are qualified to evaluate these plans during the source selection process.

See Chapter 38, "Source Selection for FIP Resources," for a more detailed discussion of the source selection process.

Incorporation by Inclusion

A fourth way to protect against early obsolescence is to incorporate *by inclusion* into the contract, any language in an offer which promises, as part of the warranty, to provide automatic or periodic upgrades caused by new technology.

For example, if an offeror promises as part of the warranty to upgrade software or hardware as new technology becomes available, this can be incorporated into the contract.

Technology Insertion Clause

A fifth way is to include in the solicitation a *technology insertion clause*, requiring the offerors to propose that they will automatically or periodically insert new technology into the FIP equipment as it becomes available, at a reasonable price.

For example, operating system software upgrades for main frame computers may become available as often as every year or less. You may require in the contract that, every time a manufacturer upgrades the commercial version of the operating software, that it automatically also upgrade the operating software on an installed main frame computer in an agency.

(continued on next page)

18.5 How the Acquisition Process Can Be Used to Prevent FIP Resource Obsolescence *(continued)*

Select a “Best Value” Strategy

The sixth and final way that you can protect against acquisition of outdated or obsolete FIP resources is to select a “*best value*” acquisition strategy. You should consider this strategy if you think that the FIP resource acquisition holds considerable risk for the Government.

For example, if there are relatively few providers of the required resource, or if complex development is required, or if the technological risks (including early obsolescence) are not well understood or are very likely to occur, a “best value” strategy may be appropriate.

If you merely adopt the usual “lowest price - technically acceptable” strategy, there is an increased danger that an offeror will be willing to “dump” older or nearly obsolete items at very attractive prices in order to win the award. Then, the contractor can make even more money through expensive upgrades once the Government has committed to that product. This is a form of “buying in” or “lowballing.”

On the other hand, a “best value” acquisition strategy that *considers the risks of early obsolescence and assigns costs for upgrades over the life cycle can avoid this danger.*

SUMMARY

In this chapter, you learned to distinguish between “outdated” and “obsolescence.” You also learned to use available sources of information to determine if an item is, or will soon be, obsolete, and how to use the acquisition process to prevent FIP resource obsolescence. In the next chapter, you will learn about the special considerations for computer security in some FIP resources acquisitions.

CHAPTER 19

COMPUTER SECURITY FOR FIP RESOURCES ACQUISITIONS

Chapter Vignette

“You have certainly convinced me to analyze the statement of work and the specifications very carefully,” said Mark, “now what other surprises do you have?”

“Well,” Marcia began, “one special area that you have to watch is computer security. A lot of very sensitive information gets stored and transferred on Government computers. The Government must establish and maintain the proper safeguards. The proper time to start is right at the beginning when a requirement is generated. There are several things you need to know about this area, including the various security levels, the classification system and the operational security requirements. Then there are the Privacy Act requirements. Oh yes, and then there are the viruses. We can’t forget the viruses.”

Course Learning Objectives

At the end of this chapter, you will be able to:

Overall:

Determine the requirements for computer security in all phases of the acquisition process.

Individual:

19.1 Explain the impact of each of the following key statutes on the acquisition of FIP resources:

- Computer Security Act of 1987
- Privacy Act

19.2 Explain the impact of OMB Circular A-130 on the acquisition of FIP resources:

19.3 Determine the policies that uniquely apply to or have an unusual impact on FIP resources:

- FIRMR
- DoD Directives
- DoD Instructions
- DoD Standards
- NSDD 145

19.4 Define common security terms: TEMPEST, data encryption devices, coding/decoding.

19.5 Summarize the concept of computer security, security levels, and the hierarchical classification system.

19.6 Summarize the concept of computer security in the acquisition documentation.

(Course Learning Objectives continued on next page)

Course Learning Objectives *(continued)*

Individual:

- 19.7 Explain security and privacy as an operational requirement.
- 19.8 Give examples of technical hazards.

Chapter Overview

Scope

One of the things that distinguishes FIP resources acquisitions from most other types of acquisitions is the *necessity to consider the security and privacy requirements*. Computers store huge amounts of “sensitive information.” The loss, misuse, or unauthorized access to sensitive information could greatly damage the national interest or individual reputations. For this reason, special requirements for security and privacy have been developed. Classified data is sensitive, but not all sensitive data (e.g., payroll data) is necessarily classified.

These special requirements are included in several special statutes, in certain OMB circulars and in Department of Defense Directives, instructions and standards, FIPS PUBS and Federal Standards. In addition, several references are published by the National Computer Security Center (NCSC).

In order to meet all the security and privacy requirements of a FIP resource acquisition, *it is strongly advised that you consider all the requirements right from the beginning*. That means that the requiring agency should automatically consider the security and privacy requirements as part of acquisition planning as soon as requirements become known.

FIRMR Part 201-18

FIRMR Part 201-18 (Planning and Budgeting) requires Federal agencies to consider security and privacy needs in the development of the five-year plan to meet the agency’s information technology needs.

In fact, computer security is one of the mandatory considerations that the requiring agency **MUST** discuss in the requirements analysis. (For example, see Chapter 21, “Purpose of a FIP Resource Requirements Analysis.”)

In some FIP resource acquisitions, the requirement for security and privacy considerations will be very obvious. For example, if a computer system will be used for the storage of sensitive data on individuals, work records, or classified data of any kind, the requirements will be obvious. But sensitivity of data does not only concern individual data. Organizational data may also be extremely sensitive. Therefore, all such data must be protected in accordance with the provisions of the Privacy Act.

In such cases, the security and privacy requirements may be the most important single factor in the acquisition, and they will probably be spelled out clearly in the Acquisition Plan and the Requirements Analysis.

(continued on next page)

Chapter Overview

Responsibilities

As a contract specialist or contracting officer, you are not expected to be an expert on computer security, but you must be aware that the program office or requiring activity technical staff are responsible to:

1. Determine the security and privacy needs of the system to be acquired;
2. Document those needs in the requirements analysis;
3. Identify the level of trust required in the system; and
4. Perform, as necessary, a risk analysis.

However, as the contract specialist or contracting officer, you will be responsible to incorporate the appropriate security and privacy requirements into the RFP and all acquisition documents. This will require that you coordinate closely with the program technical, staff and security personnel.

Topics Covered in this Chapter

This chapter includes the following topics:

SECTION	TITLE	PAGE
19-1	Impact of Primary Statutes on Computer Security and Privacy	19-10
19-2	Impact of OMB A-130 on Computer Security and Privacy	19-13
19-3	Policy Requirements for Computer Security	19-15
19-4	Common Computer Security Terms	19-20
19-5	Computer Security, Security Levels, and the Hierarchical Classification System	19-22
19-6	Requirements for Computer Security in a FIP Requirement and in the Acquisition Documentation	19-24
19-7	Security and Privacy as an Operational Requirement	19-29
19-8	Example of Technical Hazards	19-30

(continued on next page)

Chapter Overview *(continued)*

References

The following list shows some of the references you may need to satisfy the security and privacy requirements discussed in this chapter. Before you take any actions related to security of FIP resources, you should assemble, read, and become familiar with these references.

Of course, depending on the nature of the procurement, you may not require every one of the following references for any one procurement, but you should assemble the references you will require and keep the following references on hand if you are frequently involved in FIP resources acquisition.

- The Federal Property and Administrative Services Act of 1949;
- The Computer Security Act of 1987;
- The Privacy Act of 1974;
- Federal Manager's Financial Integrity Act (PL 97-255)
- OMB Circular A-130, Appendix III Management of Federal Information Resources;
- FIRMR, especially Parts 201-17, 201-18, 201-20, 201-39.1001 and FIRMR Bulletin C-22;
- DoD Standard 5200.28 Department of Defense Trusted Computer System Evaluation Criteria;
- National Security Decision Directive 145 (NSDD 145);
- National Security Center Publication NSCP-004;
- NTSSI 7000. (S) TEMPEST Countermeasures for Facilities (U);
- NACSIM 5100A
- Air Force Regulation 205-16 (for Air Force security);
- Army Regulation 380-19 (for Army security);
- Navy OPNAVINST 5239.1A (for Navy security)
- Marine Corps Order (MCO) P5510.14 (for Marine Corps security);

DoD Specific References

How to Obtain Computer Security References

If you need to obtain some of these computer security references, you can get them by writing or telephoning the points of contact shown on the next page. Although the following publications are DoD-generated, civilian agencies are using these rather than re-creating them. Consult with your information resources manager or security officer.

COMPUTER SECURITY DOCUMENTS

DISTRIBUTION POLICY: To receive one complimentary copy of each of the following security publications, call or write the INFOSEC Awareness Office as follows:

Department of Defense
National Security Agency
ATTN: S332
9800 Savage Road
Ft. George G. Meade, MD 20755-6000

Telephone: (301) 688-8742

Additional copies can be ordered from the Government Printing Office.

Written Requests

Superintendent of Documents
U.S. Government Printing Office
Washington, D.C. 20402

Telephone Requests

(202) 783-3238
Hours: 0800 - 1600
[Mastercard, Visa, and Choice]

DoD Trusted Computer System Evaluation Criteria
(DoD 5200.28-STD) Orange Book (Cost: \$6.00)
GPO Stock Number 008-000-00461-7

DoD Password Management Guideline
(CSC-STD-002-85) Green Book (Cost: \$1.75)
GPO Stock Number; 008-000-00443-9

Guidance for Applying the DoD Trusted Computer System Evaluation Criteria in Specific
Environments (CSC-STD-003-85) Yellow Book (Cost: \$1.00)
GPO Stock Number: 008-000-00442-1

Technical Rationale Behind CSC-STD-003-85: Computer Security Requirements
CSC-STD-004-85 Yellow Book (Cost: \$2.00)
GPO Stock Number: 008-000-00441-2

PC Security Considerations
(NCSC-TG-002-85) Light Blue Book (Cost: \$1.75)
GPO Stock Number: 008-000-00439-1

Trusted Network Interpretation
(NCSC-TG-005, Version 1) Red Book (Cost: \$13.00)
GPO Stock Number: 008-000-00486-2

A Guide to Understanding Audit in Trusted Systems
(NCSC-TG-001, Version 2) Tan Book (Cost: \$2.00)
GPO Stock Number: 008-000-00508-7

A Guide to Understanding Discretionary Access Control in Trusted Systems
(NCSC-TG-003, Version 1) Orange Book (Cost: Unknown)
GPO Stock Number: 008-000-00539-7

Chapter Overview *(continued)*

COMPUTER SECURITY DOCUMENTS

(continued)

Glossary of Computer Security Terms
(NCSC-TG-004, Version 1) Aqua Book (Cost: \$3.25)
GPO Stock Number: 008-000-00522-2

A Guide to Understanding Configuration Management in Trusted Systems
(NCSC-TG-001, Version 2) Orange Book
GPO Stock Number: 008-000-00507-9 (Cost: \$2.00)

A Guide to Understanding Design Documentation in Trusted Systems
(NCSC-TG-007, Version 1) Burgundy Book
GPO Stock Number: 008-000-00518-4 (Cost: \$2.25)

Computer Security Subsystem Interpretation of the Trusted Computer System
Evaluation Criteria (NCSC-TG-009) Venice Blue Book
GPO Stock Number: 008-000-00510-9 (Cost: \$2.25)

Evaluated Products List

In addition, you can also obtain a list of FIP resources products that have been evaluated for security and privacy. This “Evaluated Products List” (EPL) is available from:

Superintendent of Documents
U.S. Government Printing office
Washington, D.C. 20402

Computer Security Definitions

The following table presents the common computer security definitions that you may encounter in a discussion of security and privacy. You will find related definitions in the Glossary at the end of this text/reference.

(Topic continued on next page)

Chapter Overview *(continued)*

Accreditation NSDD 145	a formal declaration by a designated approving authority (DAA) that an automated information system is approved to operate in a particular security mode, using a prescribed set of standards.
Certification NSDD 145	the comprehensive evaluation of the technical and nontechnical security features of an automated information system and other safeguards, made in support of the accreditation process, that establishes the extent to which a particular design and implementation meet a specified set of security requirements.
COMSEC FIRM Bulletin 22	Communications security systems, services, and concepts that constitute protective measures taken to deny unauthorized persons information derived from telecommunications of the United States Government related to national security and to ensure the authenticity of any such communications.
Data Encryption DoD Dir. 5200.28	The process of encoding data transmitted, received, handled, or otherwise processed by any information processing equipment.
Data Encryption Standard NCSC-TG-004	a cryptographic algorithm for the protection of unclassified data, published in Federal Information Processing Standard (FIPS) 46.
File Security NCSC-TG-004	the means by which access to computer files is limited to authorized users only.
Information Systems Security (INFOSEC) FIRM Bulletin 22	a composite of factors necessary to protect FIP systems and the information they process to prevent exploitation through interception, unauthorized electronic access, or related technical intelligence threats, and to ensure authenticity. Protection results from application of security measures, including cryptosecurity, transmission security, emission security, and computer security, to systems that generate, store, process, transfer or communicate information of use to an adversary. It also includes physical protection of sensitive materials and sensitive technical security.
National Security and Emergency Preparedness (NSEP) FIRM Bulletin 22	those physical, technical, and administrative characteristics of FIP systems that will ensure a prescribed level in times of national or other emergencies, including nuclear attack.
Records* *FIRM 201-4.001 and FIRM Bulletin B-1	all books, papers, maps, photos, machine readable materials, or other documentary materials, regardless of physical form, made or received by a Government agency under Federal law or in connection with transaction of public business and preserved or appropriate for preservation by that agency or its legitimate successor as evidence of the organization, functions, policies, decisions, procedures, operations, or other activities of the Government, or because of the informational value of data in them. Library and museum material made or acquired and preserved solely for reference or exhibition purposes. Extra copies of documents preserved only for convenience of reference, and stocks of publications and/or documents are not included.
Records Creation*	the production or reproduction of any record.
Records Disposition*	any activity with respect to disposal of temporary records no longer necessary for the conduct of business, by destruction or donation, transfer of records to Federal agency storage facilities, transfer to the National Archives or transfer to another Federal agency.
Records Maintenance and Use*	any activity involving location of records of a Federal agency; storage, retrieval and handling of records kept at an office, file locations, or selection and utilization of equipment and supplies associated with records and copying.
Sensitive Information FIRM 201-4.001	any information, the loss, misuse, or unauthorized access to or modification of which, could adversely affect the national interest or the conduct of Federal programs, or the privacy to which individuals are entitled under section 552a of Title 5, under the Privacy Act, but which has not been specifically authorized under criteria established by an Executive Order or an Act of Congress to be kept secret in the interest of national defense or foreign policy.
TEMPEST FIRM 5200.28	an unclassified short name referring to investigations and studies of Compromising Emanations (CE). CE are defined as unintentional data-related or intelligence-bearing signals, which if intercepted and analyzed, disclose the national security information-processing equipment.
Trusted Computer System DoD Dir. 5200.28-STD	a system that employs sufficient hardware and software integrity measures to allow its use for processing simultaneously a range of sensitive or classified information.

19.1 Impact of Primary Statutes on Computer Security and Privacy

Computer Security and Privacy Statutes

There are *two primary statutes* that concern computer security and privacy. You should be able to explain the impact of each of these. These two statutes are the basis in law for all the remaining references:

- Computer Security Act of 1987; and
- Privacy Act of 1974.

The definitions found in these two statutes are further expanded in the OMB Circular A-130 which provides implementing guidance for the statutes.

In addition, for some very specialized and highly classified acquisitions concerning atomic energy, you may have to consult the Atomic Energy Act of 1954

Computer Security Act of 1987

The first major law which governs computer security is the Computer Security Act of 1987. It explains the computer security roles for the Office of Management and Budget (OMB), and the National Institute of Standards and Technology (NIST).

This Act requires each federal agency to develop security plans for information technology installations that contain sensitive information, to conduct periodic security reviews, and to provide computer security awareness training for federal employees.

Under the Act, OMB develops policy and NIST is charged with development of standards and guidelines for FIP systems, to include sensitive information and unclassified information.

The GSA is responsible for providing technical advice to NIST.

(Topic continued on next page)

19.1 Impact of Primary Statutes on Computer Security and Privacy *(continued)*

Computer
Security Act of
1987
(continued)

Note that this Act requires that all operators of FIP systems MUST establish security plans. The summary of each security plan will be included in the agency's five year information resources plan. OMB Circular A-130, Appendix III, provides additional guidance concerning items to be included in the five year plan relating to security requirements.

The Security Act of 1987 mandates three important tasks:

1. Mandatory annual training in computer security;
2. Mandatory planning; and
3. At least a minimal level of compliance.

Privacy Act of
1974

The Privacy Act of 1974 is the second major statute which affects computer security. It grew out of earlier documents, including:

- A Department of Health and Urban Development (HUD) study of 1973; which resulted in a report entitled "*Computers, Files and the Rights of Citizens,*" and
- *The Freedom Of Information Act (FOIA)*, which made information gathered by the Government on citizens available on request.

These earlier documents concluded that there were serious problems with the manner in which agencies were gathering, safeguarding, and updating information on individual citizens.

As a result, the Privacy Act was the first federal law which gives any individual the right to sue the Federal government if his/her rights to privacy have been violated.

The agencies are forbidden to have personnel files which are secret and any individual has a right to request, review and correct information in his/her file and determine when, how, and to which extent, information shall be released to other parties.

All Government offices which build, maintain or store personal information in any kind of filing system, including computers, must protect that information. **This has a major impact on the acquisition and operation of computer systems.**

The Privacy Act also modified the types of information available to individuals under the Freedom of Information Act.

(continued on next page)

19.1 Impact of Primary Statutes on Computer Security and Privacy *(continued)*

Atomic Energy Act of 1954

The Atomic Energy Act of 1954 is the basis for classification of all Atomic Energy information. Of course, you will only consult this reference if you are concerned with a FIP acquisition which will support a classified atomic energy activity.

The information in this reference includes an explanation of “Restricted Data” and “Formerly Restricted Data.”

For information concerning atomic energy, the Department of Energy is the only agency that may declassify “Restricted Data.”

Note that you should not confuse these definitions with the same term as it relates to data rights. For further discussion of “restricted data,” and “data rights,” as these terms apply to FIP resource acquisitions, see Chapter 11 - “Intellectual Property and Licensing Agreements.”

Remember, for those very few FIP resource acquisitions concerned with atomic energy, you must also consider the Atomic Energy Act as a special security reference.

19.2 Impact of OMB Circular A-130 on Computer Security and Privacy

OMB Circular A-130

In addition to the statutes, OMB Circular A-130, *Management of Federal Information Resources*, requires agencies to establish a level of security commensurate with the level of sensitive information they hold and to the risk and magnitude of loss or harm that could result from improper operation of the information system.

This circular provides uniform and consistent policies with regard to the management of information resources within the executive branch. It applies not only to the management of information but also to the acquisition of information systems and the management of information technology.

The required security may involve as a minimum:

- Physical security (examples - guards, locks);
 - Personnel security (examples - security clearances);
 - Emanations security (example - use of TEMPEST equipment);
 - Communications Security (COMSEC) (examples - codes);
 - Administration (example - standard operating procedures);
 - Hardware (example - computers specifically designed for high security); and
 - Software (examples - secure operating systems software and digital signatures).
 - Transportation and installation; and
 - Maintenance personnel
-

Appendix III

Appendix III to OMB Circular A-130 expanded application of the Brooks Act, the Computer Security Act, and the Privacy Act, as they apply to information technology installations.

It defines “*sensitive data*” as data that requires protection due to the risk and magnitude of loss or harm that could result from inadvertent or deliberate disclosure, alteration, or destruction of the data. The term includes data whose improper use or disclosure could adversely affect the ability of an agency to accomplish its mission, proprietary data, records about the individuals requiring protection under the Privacy Act and data not releasable under the Freedom of Information Act.

(Topic continued on next page)

19.2 Impact of OMB Circular A-130 on Computer Security and Privacy

(continued)

Appendix III (continued)

A “*sensitive application*” means an application of information technology that requires protection because it processes sensitive data, or because of the risk and magnitude of loss or harm that could result from improper manipulation of the application.

The highlights of Appendix III to OMB Circular A-130 are listed below:

- Define sensitive information that you must protect;
 - Establish the concept of “*reasonable assurance*,” which recognizes that no security program can be 100% effective;
 - Require assignment of information security to a knowledgeable manager;
 - Establish a requirement to conduct evaluations for possible fraud, waste, and abuse in information technology installations and applications they support;
 - Require development of disaster recovery and continuity of operations plans (COOP) for all information technology installations;
 - Expand the definition of computer security to include internal control (i.e. applications should do “exactly what they are supposed to do and nothing more”); and
 - Require computer security awareness training for Federal employees associated with the development, operation, or use of information systems.
-

19.3 Policy Requirements for Computer Security

Policies That Affect Computer Security and Privacy

In addition to the two statutes and the OMB Circular already discussed in this chapter, there are several policy documents which you should understand in order to determine the policies that apply to or have an unusual impact on a FIP resources acquisition.

These policies are contained in various documents such as the FIRMR, Directives, Instructions, and Standards.

In general, these policy requirements promote computer security by prescribing control, through specific security features, of access to information, so that only properly authorized individuals will have access to read, write, create, or delete information.

FIRMR on Computer Security and Privacy

The FIRMR provides certain guidance on computer security and privacy. In particular, you should review and understand the following FIRMR sections:

- FIRMR 201-20.103-6 discusses mandatory consideration of security requirements when developing a requirements analysis;
- FIRMR 201-21.3 discusses security and privacy;
- FIRMR 201-21.603 discusses listening-in to or recording telephone conversations; and
- FIRMR 201-39.5202-5 discusses privacy or security safeguards.

FIRMR Bulletin C-22

FIRMR Bulletin C-22 provides guidance on security and privacy protection for FIP resources, including those resources provided by contractors.

(continued on next page)

19.3 Policy Requirements for Computer Security *(continued)*

DoD Directives and Instructions

The DoD has more experience with computer security and privacy requirements than most other Federal agencies. As a result, DoD has established a series of directives and instructions to assist personnel in meeting security requirements in acquisition, fielding and operation of FIP resources. DoD continually updates these directives, based in part on new developments in technology. If you are concerned with a FIP resources acquisition which includes computer security requirements, it is strongly recommended that you review these various computer security documents, directives and instructions. Many are published with covers of different colors, so you may hear them referred to as the “rainbow” series.

Civilian Use Of DoD Directives

The DoD has so much experience with FIP security and privacy and has established many useful standards. Although they are not bound by DoD directives, many other Government agencies use them in addition to their own agency-specific directives.

DoD Standard– “Orange Book”

In addition to the DoD directives and instructions on computer considerations, DoD has also published several standards which provide guidance on computer security. For example, one standard established by DoD which is widely used throughout the federal government is DoD Standard 5200.28, Department of Defense Trusted Computer System Evaluation Criteria, commonly called the Orange Book.

DoD STD 5200.28

This standard includes the six security standard requirements.

Note that four of the fundamental computer security requirements deal with what needs to be provided to control access to information, and two of the requirements deal with how you can obtain credible assurances that this has been accomplished.

19.3 Policy Requirements for Computer Security *(continued)*

DoD 5200.28 STD
Requirements

Policy Requirements

- **Requirement 1 - Security Policy.** *There must be an explicit and well-defined security policy enforced by the system.* For example, no person lacking proper authorized personnel security clearance shall obtain access to classified information.
- **Requirement 2 - Marking.** *Access control labels must be associated with objects.* For example, it must be possible to mark every object, such as a computer, with a label that reliably identifies the object's sensitivity level (e.g. classification) and/or the modes of access for those who may potentially use the object.
- **Requirement 3 - Identification.** *Individual objects must be identified.* For example, each access to information will depend on who is accessing the information and what classes of information they are authorized to deal with.
- **Requirement 4 - Accountability.** *Audit information must be selectively kept and protected so that actions affecting security can be traced to the responsible party.* For example, the system must be able to record or log each security-related event in some manner.

Assurance Requirements

- **Requirement 5 - Assurance.** *The computer system must contain hardware/software mechanisms that can be independently evaluated to provide sufficient assurance that the system enforces requirements 1 through 4 above.* For example, there must be some permanently installed feature in the operating system which can meet the above requirements 1 - 4.
 - **Requirement 6 - Continuous Protection.** *The trusted mechanisms that enforce these basic requirements must be continuously protected against tampering and/or unauthorized changes.* For example, the basic hardware and software must not be subject to unauthorized modification or alteration.
-

19.3 Policy Requirements for Computer Security *(continued)*

NSDD 145 Directive

National Security Decision Directive 145 (NSDD 145) is entitled “*National Policy on Telecommunications and Automated Information Systems Security*.” It was signed by President Reagan in 1984.

This revised directive complies with the Computer Security Act of 1987 and the Warner Amendment, and delineates responsibilities within the Federal Government for national security systems.

It provides initial objectives, policies, and an organizational structure to guide the conduct of national activities toward safeguarding systems that process, store, or communicate sensitive information; establishes a mechanism for policy development; and assigns implementation responsibilities.

For example, it directs the establishment of a permanent Subcommittee on Telecommunications Security (STS) and a permanent Subcommittee on Automated Information Systems Security (SASS).

These permanent subcommittees meet to establish policy on FIP resources.

This directive provides the definition for sensitive data shown in the following table.

SENSITIVE BUT UNCLASSIFIED DATA		
Data Type	Definition	Example
Financial Sensitive (very sensitive)	Data processed are used in direct payment operations. Data compromise or alteration could result in significant legal or financial liability	Systems with a direct link to payroll, electronic funds transfer.
Critical Operations (very sensitive)	Alteration or compromise of data contained in or processed by an application could have significant adverse effects on an agency's ability to complete its mission in an effective manner.	Air traffic control systems, weather forecasting.

(Table continued on next page)

19.3 Policy Requirements for Computer Security *(continued)*

NSDD 145
Directive

SENSITIVE BUT UNCLASSIFIED DATA <i>(continued)</i>		
Personnel (sensitive)	Data stored/processed are covered by the Privacy Act. Data compromised could result in legal liability but not significant financial liability.	Personnel systems without direct link to payroll.
Administrative (moderately sensitive)	Data compromise might cause embarrassment but would not result in legal/financial liability. Resultant reports are generally releasable under the Freedom of Information Act.	Budget planning systems.
Non-sensitive (least sensitive)	Small programs, easily reconstructed. No effect on agency operations if data are lost or compromised. No financial liability.	Training aids.

NTSSI 7000 (S)

NTSSI 7000 (S) “*TEMPEST Countermeasures for Facilities (U)*” is the basic policy document that governs the use of TEMPEST resources. If the requiring agency has a classified requirement for TEMPEST equipment, you may also require access to this reference.

Note that the title is unclassified, but the contents are classified as “SECRET.”

19.4 Common Computer Security Terms

Common Definitions and Terms

The overview to this chapter contains a table of many of the common terms and definitions concerning computer security. This section addresses several terms which require additional explanation.

TEMPEST Considerations

When equipment is required to control electrical emanations, TEMPEST items are used. TEMPEST equipment is normally approved through use of NTSSI 7000.(S) “*TEMPEST Countermeasures for Facilities (U)*.”

TEMPEST products which are in the accreditation process and have completed the certification process are listed on the Evaluated Products List (EPL). Items which have completed the *certification process* are authorized for acquisition and use in a secure environment. In order to receive TEMPEST certification, an item must be evaluated against the specific requirements stated in NACSIM 5100A, “Compromising Emanations Laboratory Test Standards.” The item can then be included on the EPL.

Although items on this list may be accredited they may not necessarily be certified for acquisition to satisfy TEMPEST requirements.

Data Encryption Devices

Data encryption devices are often used when it is necessary to send information or data over public telecommunications and there is a requirement to protect the information against unauthorized disclosure.

A cryptographic algorithm is a standard approved by the National Institute of Standards and Technology, and is approved for public use under FIPS 46.

Digital Signature Technology

A new form of coding/decoding technology that is rapidly gaining use is digital signature technology (DST). DST is increasingly used in client-server and LAN systems to reduce unauthorized access and use of non-secure computer systems.

Briefly, digital signature technology attaches an invisible unique “digital signature” to each document or message sent by each computer user. That digital signature is unique to only one person, and unless recognized electronically by the network, will not be accepted.

For example, if one net user sends an electronic mail message, the message will automatically include that person’s digital signature, without any further action on his/her part.

19.4 Common Computer Security Terms *(continued)*

User Computer Security Concerns

You should also be aware of the user's computer security concerns, including the problems of accreditation and certification. However, their use of these terms are different than these terms used in acquisition.

- **Accreditation** - recall that this refers to a formal declaration by a designated approving authority (DAA) that an automated information system is approved to operate in a particular security mode, using a prescribed set of standards.

Accreditation is the “official management authorization for operation of an automated information system” and is based on the certification process, as well as other management considerations.” (See National Security Center publication NCSC—004 Version 1 dated 21 October 1985.)

The accreditation statement affixes security responsibility with the DAA and shows that due care has been taken for security.

- **Certification** - refers to “the comprehensive evaluation of the technical and nontechnical security features of an automated information system and other safeguards, made in support of the accreditation process, that establishes the extent to which a particular design and implementation meet specified set of security requirements.” (See National Security Center publication NCSC—004 Version 1 dated 21 October 1985.)
-

19.5 Computer Security, Security Levels, and the Hierarchical Classification System

Hierarchical Classification System

In order to meet the varying needs for computer security, DoD Standard 5200.28-STD established the concept of the **hierarchical classification system**.

In the hierarchical classification system, the criteria for computer security are divided into four divisions, A, B, C, and D, with A being the highest, and D the lowest.

As you progress upward from D to A, there is a major increase in the *confidence* that you can place in the overall security. For example, the criteria that apply to computer systems in division A are very comprehensive and include design features intended to make the system highly tamper-proof.

On the other hand, the criteria that apply to computer systems in division D are far less comprehensive.

In most FIP resource acquisitions, you will probably be concerned with the security criteria in Divisions B and C.

The table on page 19-25 summarizes the four divisions and the classes in the hierarchical classification system.

Division B and C Classes and Criteria

Note that, within divisions B and C, there are several subdivisions known as classes. Within each class, there are four major sets of criteria you must meet.

The first three criteria concern the broad control requirements of Security Policy, Accountability, and Assurance already discussed.

The fourth set of criteria concerns Documentation.

(continued on next page)

19.5 Computer Security, Security Levels, and the Hierarchical Classification System *(continued)*

Table of
Hierarchical
Classification
System

DoD Standard 5200.28

Hierarchical Classification System	
Division	Description
A	<p>Verified Protection—Division A systems (the highest classification) are the most secure. They require formal security verification methods to assure that they can protect classified or sensitive information stored in the system. Requires extensive documentation to demonstrate that the trusted computing base meets the security requirements in all aspects of design, development and implementation.</p> <ul style="list-style-type: none"> Class A1—Verified Design Beyond Class A1 (includes newest security developments in systems architecture and security testing.)
B	<p>Mandatory Protection—Division B systems require all the features required for Class C, plus an informal statement of the security policy model, data labeling, and mandatory access control over named subjects and objects. Any flaws identified by system testing must be removed.</p> <ul style="list-style-type: none"> Class B1—Labeled Security Protection Class B2—Structured Protection Class B3—Security Domains
C	<p>Discretionary Protection—Classes in this division provide for discretionary (need to know) protection and, by including audit capabilities, for accountability of subjects and the actions they initiate.</p> <ul style="list-style-type: none"> Class C1—Discretionary Security Protection. The Trusted Computing Base (TCB) of a Class C1 system provides separation of users and data. It includes controls for limiting access by individuals, to prevent unauthorized reading or destroying of their data files. Class C2—Controlled Access Protection. Systems in this class have a more refined discretionary access control than Class C1 systems. C2 class systems make users individually accountable for their actions, through log-in procedures, auditing of security-relevant events and resource isolation. Normally you will use C2 criteria.
D	<p>Minimal Protection—reserved for those systems that have been evaluated, but that fail to meet the requirements for a higher evaluation class.</p>

19.6 Incorporating Computer Security Into the Acquisition Documentation

Introduction

This section discusses where computer security is incorporated into the acquisition documentation. Briefly, you should look for discussion of computer security requirements in the:

- Specification/Statement of Work;
- Section I;
- Section J (Contract Data Requirements List (CDRL) or in attached security forms, such as DD 254;
- Section L - Specific Instructions to Offerors; and
- Section M - Evaluation Criteria

In addition, depending on the solicitation, you may need to tailor and incorporate information from the Orange Book into Section C.

In a FIP resources acquisition, the security requirements must be incorporated into the acquisition planning as early as possible. You can clarify your requirements for computer security and privacy by checking the Specifications, Standards, FIPS PUBS and Federal Standards, but start with the Acquisition Plan.

Computer Security in the Acquisition Planning Phase

As the requiring agency develops the requirement for a FIP resource, it must consider computer security and privacy requirements. This should include a review of all the references discussed in this chapter and a determination as to the level of computer security and privacy required for the acquisition.

As a contract specialist, or contracting officer, you should ask whether the security and privacy concerns have been addressed in the Acquisition Plan. If there is no mention of these concerns, you should ask the staff members who prepared the Acquisition Plan whether they considered computer security and privacy.

You should be able to predict a requirement for computer security as early as the acquisition planning phase.

(Topic continued on next page)

19.6 Incorporating Computer Security Into the Acquisition Documentation

(continued)

Computer Security in the Acquisition Planning Phase

The requirements for security and privacy can be predicted when you first read the Acquisition Plan and ask the following questions:

1. *What type of data will be stored on the computer?* If the data is sensitive in any way, such as any type of personal data subject to the Privacy Act, then there is a requirement for computer security.

Examples of such sensitive data include any type of personnel information, and/or any data, and nearly any information that is subject to the restrictions of the Freedom of Information Act.

2. *Who will have access to the data?* There is a chance that a person other than those authorized and required by their duties will be able to access the data; therefore, there is almost certainly a requirement for computer security and/or privacy to be considered.

Requirement for Security and Privacy in the Solicitation Phase

You should also be able to predict a requirement for security and privacy in the solicitation phase. Once you understand what the requirements analysis and risk analysis have determined, and what level of trust is demanded by the system, it is relatively easy to predict the kind of language that you must include in the RFP and SOW to alert the offeror(s) to these requirements.

For example, suppose that you had a DoD computer buy in which the technical program staff had established a requirement for a relatively high level of trust, such as Division B. In this case, you should follow the guidance in the “Orange Book” (DoD 5200.28-STD) and ensure that the necessary levels of security would be carried through all the necessary documentation, to include:

- The RFP;
- Specifications;
- Acquisition Plan;
- Source Selection Plan, and
- All associated documents.

(continued on next page)

19.6 Incorporating Computer Security Into the Acquisition Documentation

(continued)

Sample Language
for RFP—
Section L

For example, in Section L of the RFP, you might use language such as the following to alert the offerors about a requirement to meet the relatively high level of trust (Mandatory Protection) specified for Division B devices.

“LXX—The offeror shall explain how it proposes to maintain isolation of the Trusted Computer Base (TCB) in its own domain and free from external interference or tampering and how the TCB will maintain process isolation. The offeror shall explain hardware and software features that are to be provided to test the security operation of the system and what methodology the offeror will follow in searching for flaws.”

For a more common Division C level of trust (Discretionary Protection) you might use language like the following to alert offerors about the requirement to meet all relatively lower levels of trust.

“LXX— The offeror shall explain how it proposes to establish a discretionary access control to hold system users individually accountable for their actions, through log in procedures, auditing of security-relevant events, and resource isolation.”

Sample Language
for RFP
Section M

You would carry out this requirement to explain the level of trust and security throughout the RFP, as necessary. For example, in Section M, when you are explaining the evaluation factors, you might use language like the following for a Division B level of trust:

“MX—Computer documentation security requirements will count as one third of the total score of the offeror’s technical proposal.

MX—Documentation. The offeror’s ability to provide necessary documentation will be evaluated on the ability to demonstrate that they understand the purpose and content of security documents listed as CDRL (e.g., audit report, security testing, procedures, design specifications verification documentation, users guides, trusted facilities manuals, test documentation and design documentation.”)

For a Division C level of trust (Discretionary Protection), you might use somewhat different language like the following to explain the evaluation factors. Note that this language is similar to the previous example, but there are differences based on the level of trust required.

(Topic continued on next page)

19.6 Incorporating Computer Security Into the Acquisition Documentation

(continued)

Sample Language
for RFP
Section M
(continued)

“MX—Computer documentation security requirements will count as one third of the total score of the offeror’s technical proposal.

MX—Documentation. The offeror’s ability to provide necessary documentation will be evaluated on the ability to demonstrate that it understands the purpose and contents of security documents listed as CDRL (e.g., security features user’s guide, trusted facility manual, test documentation and design documentation).”

Sample Language
for the Solicitation

Continuing this example, you might use language like the following in this part of the solicitation for a Division B level of trust:

“XX—Test Documentation. The contractor/system developer shall provide to the Government a document that describes test plans and test procedures which show how security mechanisms were tested, and the results of the security mechanism functional testing.”

Again, for a Division C level of trust, you would use somewhat different language such as:

“XX —Test Documentation. The offeror’s ability to provide necessary documentation will be evaluated on the ability to demonstrate that it understands the purpose and contents of security documents listed as CDRL (e.g., security features user’s guide, trusted facility manual, test documentation, and design documentation).”

(continued on next page)

19.6 Incorporating Computer Security Into the Acquisition Documentation

(continued)

Requirements for
Security in the
Evaluation of
Proposals

Of course, you must also establish strict security procedures, as required, in the evaluation of proposals. If the solicitation concerns FIP resources for classified purposes, then you may have to tighten control and access to all documents concerning the solicitation and evaluation. For example, during the technical evaluation you will have to ensure that only “cleared” evaluators with a valid need-to-know will have access to the classified documents. This will require a document control and marking procedure. Your security officer should assist you in developing a document control procedure, to ensure that classified documents are not compromised during evaluation of proposals.

19.7 Security and Privacy as an Operational Requirement

Introduction

This section discusses security and privacy as an operational requirement. Even if you have thoroughly considered the requirements for computer security and privacy during all the prior phases of the acquisition process, it is still possible to compromise the security and privacy system if the operational requirements do not consider computer security and privacy.

Operational Procedures for Security

Operational procedures are usually established to be preventive in nature, that is, they are intended to prevent compromises of computer security or violations of the privacy requirements. In most cases, agencies will already have established operating procedures for computer security. For example, these operating procedures will normally explain which files (if any) require special access.

In general terms, *security in a computer system is determined by controls on access to information*, so that only properly authorized individuals will have access to read, write, create, or delete information. For example, only certain individuals may be allowed to access certain files or software applications.

Monitoring Software and Privacy Violations

There is also a new class of software called “monitoring software” which allows supervisors to monitor a computer or workstation and determine information such as:

- How long a computer was logged on;
- Which files were accessed;
- Whether any application software programs were installed; and
- Worker performance (files opened, number of keystrokes, number of documents completed, etc.)

Although monitoring software can be a valuable tool for supervisors, its use does raise some privacy issues. The 1986 Electronic Communications Privacy Act protects the privacy of *personal communications*, but employers and law enforcement agencies are allowed to monitor employee activity and personal communications on the job.

Therefore, you are authorized to obtain and use such monitoring software.

19.8 Examples of Technical Hazards

Introduction	<p>This section discusses technical hazards in a FIP resource acquisition. Technical hazards are a major concern for information resource managers.</p> <p>A technical hazard is a danger to the security or integrity of the computer. Technical hazards can include environmental hazards caused by electricity or other environmental factors and also deliberate attacks on the security and integrity of the computer or its hardware.</p>
Environmental Hazards	<p>You can easily protect against most environmental technical hazards through simple and common measures. These include protecting the computer against static electricity and magnetism through the use of grounding, surge protectors and anti-static sprays. These items are inexpensive and available from commercial vendors.</p>
Deliberate Attacks	<p>Deliberate attacks are more serious. The most common and dangerous types of technical hazards include <i>viruses</i>, <i>time bombs</i>, <i>trapdoors</i> and <i>Trojan horses</i>.</p>
Viruses	<p>A virus is a software code which is programmed to secretly insert new code into an existing computer program. Usually, the virus gives the existing program instructions to “reproduce” and disseminate the virus code, passing it on to any other computer which accesses the infected program. Thus, it is possible to infect literally thousands of computers very quickly over large networks.</p> <p>A virus may be programmed to simply flash a harmless message, but some viruses are very destructive, altering or destroying all existing programs or data. The damage can run into the millions of dollars, lost operating time, and missions being compromised.</p>
Time Bombs	<p>A time bomb is a virus which lays dormant and undetected until a certain clock time is reached on the computer clock. It then activates and either reproduces or disrupts the host computer program.</p>

19.8 Examples of Technical Hazards *(continued)*

Trapdoor	<p>A trap door (synonymous with “back door”) is a hidden software or hardware mechanism that can be triggered to permit an unauthorized person to circumvent system protection mechanisms. A trap door is activated in some innocent-appearing manner, such as a special “random” key sequence at a terminal.</p> <p>Some software developers place trap doors in their code to enable them to reenter a system and perform certain functions. The problem is that unauthorized persons can also use the trapdoor.</p>
Trojan Horse	<p>A Trojan Horse is an innocent looking computer program which enters the computer system defenses because it "looks right" and then causes damage or destruction.</p>
Technical Hazards Posed by Software	<p>You can see that all the technical hazards discussed above can enter a computer system through software. <i>It is critical to ensure that the operational requirements and operational procedures established for the contract administration phase consider the dangers of technical hazards, especially from unauthorized software.</i></p>
Avoid Unauthorized Software	<p>One way to avoid technical hazards is to avoid using ALL software which is offered “free” through electronic user bulletin boards. The use of this type of software is strictly unauthorized in nearly all Government agencies because of the grave risks involved. In some agencies, the operating procedures forbid the loading of any software unless it has been specifically tested and approved by the system administrator.</p>
Example	<p>For example, an electronic bulletin board may offer a free software feature which promises to enhance computer graphics. If a user accepts the free software and loads it on to his/her hard disk, the Trojan horse can destroy data on the disk.</p>

19.8 Examples of Technical Hazards *(continued)*

Use by
Government
Contractors

The restrictions concerning technical hazards should also be applied to contractors working on Government facilities. For example, if a contractor is operating computer hardware or software on a Government facility, such as during an acceptance test, you should tell the COTR to ensure that the contractor understands and complies with the Government's computer security and privacy requirements to minimize the dangers of technical hazards.

For example, the COTR should explain to the contractor that unauthorized software, such as computer games, will not be allowed on the facility.

For a more detailed discussion of software, see Chapter 12, "Acquiring Commercial Software."

SUMMARY

In this chapter you learned to determine the requirements for computer security in all phases of the acquisition process. In the next chapter, you will learn how to identify and explain FIP resources budget procedures.

CHAPTER 20

PLANNING AND BUDGETING FOR FIP RESOURCE ACQUISITIONS

Chapter Vignette

Marcia began to explain the statutory and regulatory requirements for planning and budgeting to Mark.

“There are certain requirements and procedures that must be observed while planning and budgeting for a FIP resources acquisition. In addition, you need to know the relationship between acquisition planning and other types of agency planning required by law. Some planning requirements are ‘specific’ and others are ‘strategic.’ The submission of the budget is also important. In this proposed acquisition, we are considering a procurement worth half a billion dollars, so we really have to do our homework.”

Course Learning Objectives

At the end of this chapter, you will be able to:

Overall:

Identify and explain FIP resources planning and budget procedures.

Individual:

- 20.1 Explain the impact of budget and appropriation statutes on the acquisition of FIP resources.
- 20.2 Explain the impact of OMB Circular A-11 on the acquisition of FIP resources.
- 20.3 Identify regulation requirements for acquisition planning and budgeting.
- 20.4 Differentiate between the types of FIP resources planning.
- 20.5 Identify the requirements for acquisition planning as part of the FIP acquisition process.
- 20.6 Identify and explain the FIP resources budget procedures and process.

Chapter Overview

Scope

Planning and acquiring funding for FIP resources takes place within a larger framework of agency mission planning, sometimes called strategic planning. After all, you buy FIP resources not for the technology, but for what the technology can do to help meet your agency's mission and objectives.

It helps to think of agency planning as having an organizing framework. One way of viewing the relationships within the agency planning is shown in the figure below. At the top of the framework is the agency's strategic plan, written in terms of broad goals and objectives. Underneath the strategic plan are supporting plans of increasing levels of detail. These supporting plans—sometimes referred to as 'specific,' 'operational,' or 'tactical' plans—help the agency achieve the objectives set forth in the strategic plan.

Planning Pyramid



Adapted from an illustration in the *Information Resources Management Strategic Guide*, Dec. 1993, issued by GSA's Federal Systems Integration and Management Center (FEDSIM)

These supporting plans help bring the resources of the organization together to meet the mission. These resources include:

- the people, deployed under the Human Resource Plan;
- their knowledge and skills, enhanced under the Training Plan;
- the data and information, managed under the Information Plan;
- the agency's financial resources, acquired and directed by the Budget Plan; and
- the technical resources, acquired and managed under the IT (information technology) Acquisition Plan and Computer Security Plan.

(Topic continued on next page)

Chapter Overview *(continued)*

Scope (continued)

For example, the Department of Defense has the broad, strategic mission of protecting the life and liberty of citizens of the United States. In support of that mission, a DoD agency might have the objective of maintaining armed service personnel, equipped with the necessary tools, in combat-ready status.

To meet the mission, the agency would have to plan for and manage the people, ensuring that they have the required skills. In addition, the agency would need to determine the information and technology needed to support combat and intelligence functions. Then the agency would have to estimate how much money would be required and submit the request through channels to Congress for appropriation of funds. Finally, the contracting and program staff would need to develop detailed acquisition and implementation plans to buy and field the resources.

So you can see how the acquisition of handheld computers, which can provide instantaneous information and communications even in the field, might support an agency's broad strategic plan.

Understanding your agency's overall planning framework helps you to understand the significance of the procurements you conduct. This knowledge will help you to be more effective in your job, as you communicate the purpose of the acquisition to contractors and to others inside and outside your agency. This information is also essential when you participate in the development and execution of a selection plan to choose the contractor most likely to achieve the performance required by agency plans.

This chapter discusses the information you need to understand the planning and budgeting process, including the FIRMR planning requirements for FIP resource acquisitions.

(continued on next page)

Chapter Overview *(continued)*

References

You may need to refer to the following references to understand and perform the procedures discussed in this chapter:

- *Anti-Deficiency Act* (31 U.S.C. 1517);
- *Government Performance and Results Act of 1993*, P.L. 103-62
- *Paperwork Reduction Reauthorization Act of 1986*, P.L. 99-500
- *Computer Security Act of 1987*, P.L. 100-235
- *Rehabilitation Act Amendments of 1986*, P.L. 99-506
- OMB Circular A-11, *Preparation and Submission of Budgets*
- OMB Circular A-130, *Management of Federal Information Resources*
- Federal Acquisition Regulation (FAR) Part 7, *Acquisition Planning*
- Federal Information Resources Management Regulation (FIRMR), especially Part 201-18, *Planning and Budgeting*

Topics in This Chapter

This chapter includes the following topics:

SECTION	TITLE	PAGE
20.1	Key Statutes Affecting Planning for FIP Resources Acquisition	20-7
20.2	Impact of OMB Circular A-11 on FIP Planning and Budgeting	20-9
20.3	Key Regulations Affecting Planning for FIP Resources Acquisition	20-11
20.4	Types of FIP Resources Planning	20-13
20.5	Strategic Plans	20-15
20.6	FIP Resources Budget Procedures	20-17
20.7	Acquisition Plans	20-23

Chapter Overview *(continued)*

Guidance on Acquisition Planning for FIP Resources

There are a number of sources available on acquisition planning for FIP resources. Guidance available from GSA's IRM Reference Center includes:

- *Overview Guide: Acquisition of Information Resources*, Chapter 4
- *A Guide for Acquiring Systems Integration Services*, Chapter 4, Section 4.1
- *Handbook for Life Cycle Management of Telecommunications Systems*, Chapter 3, Section 3

In addition, GSA's Federal Systems Integration and Management Center has issued the:

- *Information Resources Management Strategic Planning Guide*
 - *Performing a Requirements Analysis for Acquisition of Federal Information Processing Equipment*, Chapter 2 (Planning)
-

GSA Assistance

GSA's OTA will review agency acquisition plans for FIP resources and provide recommendations, at a cost. This reimbursable service is provided as part of the Information Resources Procurement and Management Review Plan. Usually, this review assistance will only be used by an agency for major, complex FIP resource acquisition plans or the five-year IRM strategic plan.

If you need assistance in the review of a five year plan, contact:

General Services Administration
Authorizations and Management Reviews Division (KMA)
Washington, DC 20405

20.1 Key Statutes Affecting the Acquisition of FIP Resources

Key Statutes That Affect Acquisition Planning and Budgeting

You should know that several key statutes directly affect the acquisition planning and budgeting process for FIP resources. These key statutes include:

- The *Government Performance and Results Act of 1993*
- The *Paperwork Reduction Reauthorization Act of 1986*
- The *Computer Security Act of 1987*
- Section 508 of the *Rehabilitation Act Amendments of 1986*

Government Performance and Results Act of 1993

In 1993, Congress passed an important law called the *Government Performance and Results Act of 1993*. This law seeks to achieve significant improvements in Federal programs by requiring agencies to:

- Develop strategic plans,
- Develop performance plans to achieve the strategic objectives, and
- Carry out program performance reviews to measure actual against planned performance.

Although the law does not begin to phase in government-wide until 1997, it does require pilot projects. Twenty agencies, including the DoD, are participating in the pilot programs.

Paperwork Reduction Reauthorization Act of 1986

FIRMR 201-18.001(a)

The *Paperwork Reduction Reauthorization Act of 1986* (P.L. 99-500) affects the acquisition of FIP resources because it requires executive agencies to develop and annually revise a 5-year plan to meet the agency's information technology needs. As a result, agencies are constantly updating and projecting their information technology (IT) requirements out to 5 years. These strategic plans are typically referred to as IT Plans or IRM Plans. As you learned in Chapter 2, OMB Circular A-130 implements this law.

(continued on next page)

20.1 Key Statutes Affecting the Acquisition of FIP Resources *(continued)*

Computer
Security Act of
1987

FIRMR 201- 18.001(d)

The *Computer Security Act of 1987* (P.L. 100-235) requires agencies to identify each FIP system that contains sensitive information and to prepare a plan for the security and privacy of each such system. You can see that this statutory requirement affects acquisition and budgeting because it requires certain expenditures of staff time and money to ensure security for computers and telecommunications. For example, to meet computer security requirements, some agencies must acquire removable disc drives, special storage devices, or TEMPEST devices for desktop computers.

Rehabilitation Act
Amendments of
1986

FIRMR 201- 18.001(e)

The *Rehabilitation Act Amendments of 1986* (P.L. 99-506) require agencies to adopt accessibility guidelines so that disabled individuals can use electronic office equipment. This can lead to a requirement for special budgeting or fund allocation to comply with the intent of the law when acquiring FIP resources. For example, an agency may have to budget or allocate funds for special keyboards, voice-recognition devices, or other non-standard input or output devices for working with computers. FIRMR Bulletin C-8, *Information accessibility for employees with disabilities*, and FIRMR Bulletin C-10, *Telecommunications accessibility for hearing and speech impaired individuals*, provides guidance needed for this type of planning.

20.2 Impact of OMB Circular A-11 on FIP Planning and Budgeting

OMB Circular A-11

OMB Circular A-11, *Preparation and Submission of Budgets*, is the primary government-wide document on the budget process and procedures for *all resources*. It describes the submission requirements not just for budgetary numbers but also for narrative descriptions and justifications that support the funding requests. This circular is updated every year, normally in June or July.

Part of OMB Circular A-11 deals specifically with submission requirements related to FIP resources. Section 43 of A-11, *Data on Acquisition, Operation and Use of Information Technology Systems*, provides detailed guidance for preparing information technology budget submissions. Agencies submit budget data on all aspects of their ADPE-related functions, including support personnel, site, facility, and space costs.

OMB Circular A-11's section 43 describes three exhibits that must be submitted with the budget:

- Exhibit 43A, *Report on Information Systems*
- Exhibit 43B, *Agency Acquisition Plans*
- Exhibit 43C, *Summary Report on Obligations for Information Systems*

Note that OMB Circular A-11's requirements are referenced in FIRM 201-18.001(c) and implemented in DoD Manual 7110-1M, DoD Budget Guidance Manual, dated May 1970.

Exhibit 43A, OMB A-11

Exhibit 43A, *Report on Information Systems*, lists information system initiatives, including all financial management systems. The report includes information on system or initiative name; characterization as a financial, non-financial, or mixed system; system being replaced; and funding and FTE (full time equivalent positions, i.e., staffing) numbers.

Exhibit 43B, OMB A-11

Exhibit 43B, *Agency Acquisition Plans*, lists information system acquisitions by agency bureau with description and funding information for the current year and five years into the future. Reporting is limited to systems with cumulative obligations exceeding \$5 million for the reported six years.

20.2 Impact of OMB Circular A-11 on FIP Planning and Budgeting *(continued)*

Exhibit 43C,
OMB A-11

Exhibit 43C, *Summary Report on Obligations for Information Technology Systems*, is a consolidated report that provides funding information about the requiring agency. It includes:

- Capital investments for hardware (both telecommunications and ADP equipment), software, and site or facility
 - Personnel costs including fringe benefits, travel, and number of workyears for staff whose principal duties are directly related to IT systems
 - Equipment rental, space, supplies, and other operating costs
 - Commercial services, including ADPE time; voice and data communications; operations and maintenance; systems analysis, programming, design, and engineering; studies; and significant use of IT in contracts for other than FIP resources
 - Interagency, intra-agency, and other IT services
-

Benefit-cost
Analysis

Agencies must submit a benefit-cost analysis with the Fall budget submission before any *major information system* initiative can be considered for funding. For the purposes of OMB Circular A-11:

Major information system initiatives require obligations that exceed \$25 million over the information systems life cycle or that exceed \$10 million in any one fiscal year.

Public
Information

Contracting personnel should remember that the information in the budget is publicly available. This means that contractors can determine in broad terms what an agency has estimated for future funding for specific IT systems. You may find it beneficial to know what your prospective offerors may know about your acquisition.

20.3 Key Regulations Affecting Planning for FIP Resources Acquisitions

FAR and FIRMR

The planning requirements of law and executive policy are implemented in the FAR and FIRMR. The primary regulations are:

- FAR Part 7, *Acquisition Planning*
- FIRMR Part 201-18, *Planning and Budgeting*
- FIRMR 201-20, *Acquisition*

Acquisition Planning

FAR Part 7

FAR Part 7, *Acquisition Planning*, defines acquisition planning as:

“the process by which the efforts of all personnel responsible for an acquisition are coordinated and integrated through a comprehensive plan for fulfilling the agency need in a timely manner and at a reasonable cost. It includes developing the overall strategy for managing the acquisition.”

In addition, this part of the FAR describes policies and procedures for developing acquisition plans, including policies, responsibilities, procedures, and contents of written acquisition plans.

Planning and Budgeting

FIRMR 201-18

FIRMR 201-18, *Planning and Budgeting*, establishes government-wide policies and procedures for planning and budgeting for FIP resources, implementing the requirements of statutes and OMB Circulars.

It also sets forth the requirements for contents of the 5-year plan for information technology. It specifically requires that each FIP resource requirement reflect known budget constraints.

For example, an agency planning to acquire a computer system estimated to cost \$25,000,000 must budget for that requirement. Each year, when the requirements and budgets are sent forward, they must conform with the 5-year strategic plan, as updated. The submission of the FIP budget is extremely important. Unless the budget is submitted, the requirements cannot be financed and the acquisition must be delayed.

(continued on next page)

20.3 Key Regulations Affecting Planning for FIP Resources Acquisitions

(continued)

Needs and
Alternatives

FIRMR 201-20

FIRMR 201-20 discusses certain specific requirements for acquisition planning, including the requirements analysis and analysis of alternatives. The requirements analysis is used to determine and document requirements for FIP resources. The analysis of alternatives is done to compare and evaluate various alternatives for meeting the requirements and to determine which alternative is the most advantageous to the Government. These requirements will be addressed in detail in Chapter 21, “Purpose of a FIP Resource Requirements Analysis;” Chapter 22, “Content of a Requirements Analysis;” Chapter 24, “Analysis of a Requirements Analysis;” Chapter 26, “The Purpose and Content of an Analysis of Alternatives;” and Chapter 27, “Analyzing an Analysis of Alternatives.”

20.4 Types of FIP Resources Planning

Types of FIP Resources Planning

As you learned in this chapter's overview, planning for a FIP resource acquisition can range from very high-level strategic planning, all the way down to specific acquisition planning with very detailed schedules and performance specifications. Planning can be categorized into four broad stages:

- Strategic planning
- Tactical planning
- Operational planning
- Information systems planning

These terms are defined in the table below. However, you should know that these terms are somewhat imprecise. You may hear the terms "tactical," "operational," and "specific" used interchangeably.

Normally, the contracting office is involved in tactical and operational planning.

Types of FIP Resource Acquisition Planning		
Strategic Planning	<i>High-level planning</i> which defines the major goals, objectives and aims for FIP resource acquisitions over the long term, typically five years or more. Done by higher management personnel, including the IRM and program offices, strategic planning results in the agency strategic plan and 5-year IRM strategic plan. Lists major activities, but not specific schedules, specifications or procedures. An example of a broad strategic task would be to "modernize the computer hardware supporting the XYZ program."	Performed by High-level management staff, Program administrators and IRM managers
Tactical Planning	<i>Specific planning</i> which identifies, manages, schedules and controls the tasks needed to meet goals in the strategic plan. Usually lasts more than one year. An example of a tactical plan would be an acquisition plan, with milestones and broad specifications to acquire a computer to meet the requirements stated in the strategic plan. Usually done by technical personnel in the requiring agency and contracting office personnel.	Performed by IRM and Program managers
Operational Planning	<i>Specific planning</i> which supports the acquisition and concerns day-to-day operations, usually lasting less than one year. An example would be a training plan to familiarize all agency personnel with the operation of a new computer. This might include obtaining vendor training services. Usually done by agency technical personnel and contracting office personnel.	Performed by IRM and Program managers
Information Systems Planning	<i>Information Systems Planning</i> which develops the requirements analysis, acquisition plan, and detailed statement of requirements with specifications and standards.	Performed by Program managers, possibly IRM managers or "Trail Boss," technical and contracting office personnel

20.4 Types of FIP Resources Planning *(continued)*

“Strategic” versus
“Specific”
Acquisition
Planning

Strategic planning is very high level planning which defines the agency’s broad mission, goals, objectives, and priorities. It specifies, in the broadest terms, those FIP resource acquisitions that will enable the agency to meet the strategic goals. Strategic planning for FIP resources is, therefore, high-level planning.

Specific planning charts out how to achieve the strategic objectives. It adds detail to the framework established by the agency strategic plan. Specific plans answer, for example:

- How do we get there?
- Who will do it?
- When will it be done?
- How much will it cost?

Planning
Continuum

At this point you have learned about the many statutory, policy, and regulatory requirements for planning. You have also learned that planning can be categorized into four broad phases: strategic, tactical, operational, and information systems.

Now you need to understand that planning and budgeting is a continuous process. This “planning continuum” begins with a broad idea which is managed to its accomplishment by increasingly detailed plans. This continuum involves many people at many different levels inside and outside of the agency.

We call different stages in this continuous planning process by different names, as you learned in the Planning Pyramid on page 20–3. Now we will focus on the three most important plans in the overall planning framework:

- Strategic Plans
 - FIP Resource Budget
 - Acquisition Plans
-

20.5 Strategic Plans

Agency Strategic Plan

In 1993, Congress passed an important law called the *Government Performance and Results Act of 1993*. This law seeks to achieve significant improvements in Federal programs by requiring agencies to:

- Develop strategic plans,
- Develop performance plans to achieve the strategic objectives, and
- Carry out program performance reviews to measure actual against planned performance.

Although the law does not begin to phase in government-wide until 1997, it does require pilot projects. Twenty agencies, including the DoD, are participating in the pilot programs.

Further, the Office of Management and Budget updated its policies in OMB Circular A-130, *Management of Federal Information Resources*, to address strategic planning. The Circular states the principle: “Strategic planning is basic to the operation of sound government programs.” OMB plans further revisions to the Circular to clarify that planning for FIP resources should directly relate to and support an agency’s strategic plan.

Most agencies already operate under some type of strategic plan. Although they may carry different names, they have certain elements in common: statements of missions, vision, goals, and objectives.

You need to be aware of these requirements in general. In the months and years ahead, you will be responsible for procurements conducted to support your agency’s strategic plan. In fact, your on-the-job performance may soon be measured against performance plans that support the strategic plan.

Example of Agency Strategic Planning

Given current concerns about service to the public and Federal productivity, an agency strategic plan could establish the goal and objective to “*enhance service to the public by increasing staff productivity.*” This objective then serves as the foundation for the development of the agency’s acquisition requirements.

20.5 Strategic Plans *(continued)*

IRM Strategic Plan

FIRMR 201-18.002 implements the *Paperwork Reduction Reauthorization Act* by requiring that agencies develop a 5-year plan for information technology with the participation of both IRM and program staff. The regulation also specifies that the IT strategic plan shall:

- Reflect current and future mission and program needs
- Consider using technology to enhance program performance
- Consider using technology to meet national security and emergency preparedness needs
- Reflect budget constraints
- Form the basis for the agency's budget
- Serve as the foundation for requirements analyses
- Be updated at least annually

Note that the FIRMR establishes a clear relationship between the 5-year plan and agency strategic mission planning, the budget, and requirements determinations.

FIRMR 201-18.003 requires that agencies submit a copy of the 5-year plan to GSA's Authorizations and Management Reviews Division.

Example of Strategic Planning for FIP Resources

An agency might have a strategic IT objective of “*reducing personnel recruitment processing time from 5 days to one day using modern automation technology, not later than the end of fiscal year 199X.*” You can see how this IRM strategic objective would be one means of supporting the agency strategic objective to enhance productivity. You can also see how this level of planning is more detailed than that expressed in the agency strategic plan: the program area, role of technology, and a target date add detail.

Nonetheless, this is still a high-level objective: it does not provide such details as milestones to attain the objective. Instead, details would be specified in the specific acquisition plan supporting this objective.

You can see that higher level management, including the IRM and program managers, work out the strategic planning for FIP resources. But you should also realize that knowing the strategic objectives can help you plan your acquisition. For example, in this case you might decide to require or give extra evaluation credit for systems that combine electronic data entry for hiring, personnel forms generation, and automatic updating of the on-board personnel data base and the payroll system.

20.6 FIP Resources Budget Procedures

Planning Includes Budgeting

Once broad goals and objectives are identified and prioritized, the agency must refine its plans and seek funding. So you can see that acquisition planning includes budgeting. You cannot begin your acquisition until your agency submits a budget and Congress appropriates funds.

Key Definitions

There are a number of key definitions in budgeting and planning that you should know. They are shown in the table below.

Allocation	a system of dividing expenses and incomes among various branches, departments, etc., for a particular purpose.
Allotment	a share of funds granted to divide or distribute.
Apportionment	money taken from the Treasury to set apart or authorize for some specific purpose.
Appropriation	the approving of funding for an authorized activity The second stage in the funding process. (<i>See Authorization</i>)
Authorization	the approving of activities for funding. The first stage in the funding process.
Budget	a plan for the coordination of resources and expenditures, based upon revenues received; an itemized allotment of funds for a given period.
Centrally-managed Item	in DoD acquisitions, any item or system (such as a computer) which is centrally procured and managed on a DoD-wide or military service-wide basis.
Commitment	an administrative reservation of funds, e.g. a requisition.
Disbursement	payment for a legal liability of the Government.
Expenditure	the act of disbursing funds; a charge against available funds; a cost.
Expense/Investment Criteria	if the total FIP system cost is more than the dollar threshold established by Congress in the appropriations legislation, then all components must be funded as an investment (procurement appropriation). If the total system cost is less, then the components are considered as an expense and funded under operations and maintenance funds.
Fund Cite	an administrative citation or accounting symbol listing agency, appropriation, program, etc.
Obligation	a legal reservation of funds; a contract; an agreement enforceable by law: budgetary resources must be available before an obligation can be incurred legally.
System	a number of components or items that will be interconnected, which are designed primarily to operate together, and are procured at about the same time. A series of components necessary to satisfy a stated Government requirement.
Total System Cost	the aggregate cost of all equipment items and software acquired to meet a specific requirement. Includes installation if covered in a contract and required for system integration. Does NOT include real estate preparation costs, such as building modification or cable trenching funded under “construction” funding rules.
Turnkey Acquisition	an acquisition where a single (prime) contractor provides a complete system, including hardware, software, installation, shipping, etc. Typically a large acquisition, and at contracting, so complex that the elements can’t be reasonably separated.

20.6 FIP Resources Budget Procedures *(continued)*

Summary of Budget Submission Requirements

As you learned in the section on the effect of A-11 on the budget process, OMB Circular A-11 requires agencies to develop and submit Exhibits 43A, 43B, and 43C on certain acquisitions. In addition, it requires agencies to conduct benefit-cost analyses on information technology buys—and to submit those analyses to OMB for major information systems.

The table below summarizes the submission requirements established by OMB Circular A-11 (Revised), Transmittal Memorandum No. 64, August 4, 1993, for major information systems.

Materials Required with Fall Budget Submission	
Listing of major information system initiatives and all financial management systems regardless of cost (43A)	
An agency acquisition plan, where the cumulative obligations for the acquisition exceed \$5 million during the calendar year plus five budget years (43B)	
A benefit-cost analysis for major information system initiatives	
Materials Required after Submission of President's Budget to Congress	
Listing of major information system initiatives and all financial management systems regardless of cost (43A)	
An agency acquisition plan, where the cumulative obligations for the acquisition exceed \$5 million during the calendar year plus five budget years (43B)	
A summary report on obligations for information systems for the agency as whole (43C)	

The Contracting Office's Role in the Budget

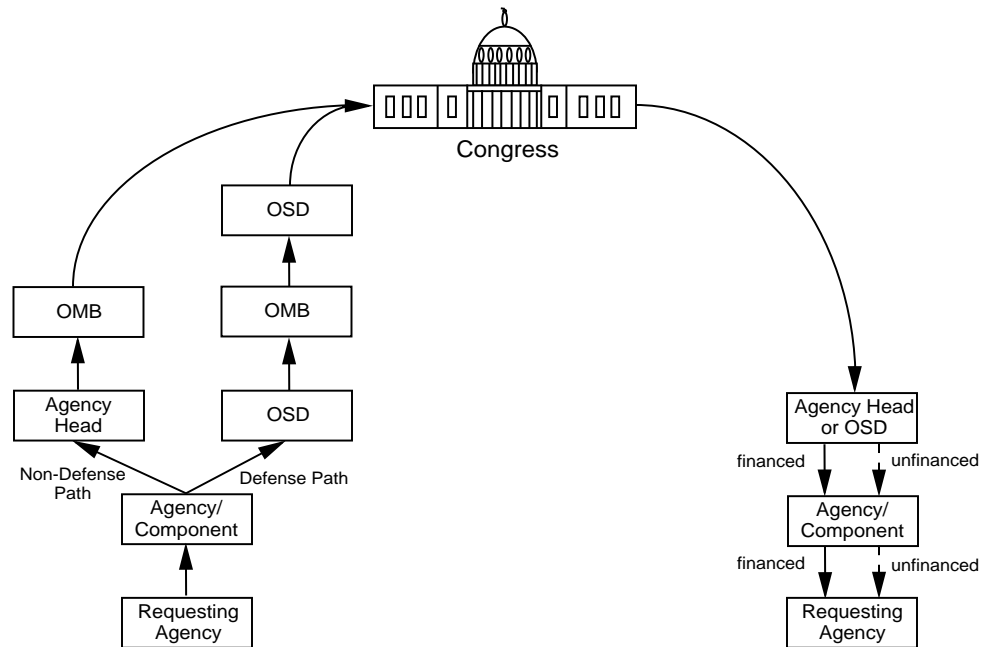
Contracting personnel may be requested by the agency's program and finance offices to help develop estimated costs for the budget submission. Such assistance might take the form of market surveys, requests for quotations, or requests for information. In addition, contracting staff may assist program staff to estimate the time and costs for contracting.

(continued on next page)

20.6 FIP Resources Budget Procedures *(continued)*

Overview of Budget Execution

In order to understand FIP budget procedures, it is helpful to look at the “big picture” for an overview of the FIP resource budget procedure. By now, you probably already understand a good deal about the overall budget process, but a refresher may be helpful. The illustration below provides a simplified overview of the budget approval process.



(continued on next page)

20.6 FIP Resources Budget Procedures *(continued)*

Congressional,
Agency, and
Department
Information
Management
Approval

Of course, FIP resource acquisitions must be financed before they can be initiated. The preceding graphic on page 20-18 shows how agencies forward their requests for financing to the Congress. Note that in this process:

- All financing requirements **MUST** go through the agency or defense component for approval. Some requirements are rejected at that level.
 - Defense requirements must be approved by the Office of the Secretary of Defense (OSD) before going to OMB. Non-defense requirements for FIP resources are forwarded to the agency head, then on to OMB (if approved). If approved, the requirements go on to Congress for funding.
 - Congress provides the agency head (or OSD) a certain level of funding. At this point, the requirements are designated as either “financed” or “unfinanced,” before returning to the agency. Acquisition can then proceed on the financed requirements. Of course, no further procurement can occur on the unfinanced requirements unless they are again submitted or become financed.
-

Approved &
Funded vs.
Approved &
Unfunded

You should understand the distinction between “approved and funded” *versus* “approved and unfunded.” An approved requirement may not necessarily be funded. Unless a requirement is approved **AND** funded, you should **NOT** proceed with the acquisition. In some cases, a requirement may be approved for several consecutive years before it is finally funded.

Congressional
Authorization and
Appropriation

Congress approves funds in two separate decision-making stages. First, Congress approves the functions for which expenditures will be made. This is called *authorization*. For example, Congress passes laws that authorize (but do not fund) certain activities, such as foreign aid and defense. Most federal programs are now authorized annually by Congress.

After programs are authorized, Congress provides funds. This is called *appropriations*. The laws under which funds are provided are referred to as appropriations acts or laws.

(Topic continued on next page)

20.6 FIP Resources Budget Procedures *(continued)*

Congressional Authorization and Appropriation (continued)

You should also understand that the laws under which Congress authorizes and appropriates funds for agencies can provide not only program approval and funds, *but also conditions on use of the funds*. As you learned in Chapter 1, DoD's exemption from the *Brooks Act* (referred to as the Warner amendment) was passed in Public Law 97-86, *DoD Authorization Act* in 1982. You should also know that any conditions or new provisions are typically implemented in executive branch regulations, procedures, or policy papers.

Therefore, it is not necessary for you to review appropriations acts, which are often hundreds of pages long. You should, however, maintain close contact with your finance, regulatory, and legal offices to determine if there are any restrictions on use of the appropriated funds.

Anti-Deficiency Act

In your FIP resource acquisitions, you must be sure that each planned expenditure is matched by funds to pay for that acquisition.

You will recall that the Anti-Deficiency Act (31 U.S.C. 1517) provides specific cautions to contracting officers, contracting specialists and other Federal employees as follows:

- “No officer or employee of the United States shall make or authorize any expenditure from or create or authorize an obligation under any appropriation or fund in excess of the amount available therein; nor shall any such officer or employee involve the Government in any contract or other obligation, for the payment of money for any purpose, in advance of appropriations made for such purpose, unless such contract obligation is authorized by law”
- “No officer or employee of the United States shall authorize or create any obligation or make any expenditure (A) in excess of an apportionment or reappropriation, or (B) in excess of the amount permitted by regulations prescribed...”

(continued on next page)

20.6 FIP Resources Budget Procedures *(continued)*

Examples of Violations

Examples of types of violations of the Anti-Deficiency Act that you **MUST AVOID** in a FIP resource acquisition include:

- Authorizing (committing) obligations or incurring obligations in excess of any appropriation, allotment or subdivision
- Committing or obligating funds in advance of any appropriations
- Overdisbursing funds
- Exceeding a statutory or regulatory ceiling on a type of transaction
- Accepting voluntary services or creating a personnel services contract not otherwise authorized by law.
- Misuse or mishandling of appropriate revolving funds.

Acquisition Plans

The following section provides information necessary for acquisition planning. For more information, see Chapter 35, Preparation of an Acquisition Plan.

20.7 Acquisition Plans

Agency Rules for Acquisition Plans

FAR 7.103

Agency heads are responsible under the provisions of FAR 7.103 for “establishing criteria and thresholds at which increasingly greater detail and formality in the planning process is required as the acquisition becomes more complex and costly, specifying those cases in which a written plan shall be prepared.”

This means that most acquisition planning requirements will be in your agency’s regulations or procedures.

Participants in Developing Acquisition Plans

FAR 7.104

The FAR emphasizes that acquisition planning should begin as soon as the agency’s need is identified. Preferably, this should be well in advance of the year of planned contract award.

Planning is coordinated by a “planner” nominated by the agency head or his or her designee. It is up to the planner to form a team of all those responsible for significant aspects of the acquisition. This normally includes contracting, fiscal, legal, and technical personnel.

Starting Point for Acquisition Plans

Acquisition planning begins with a more detailed concept of the procurement than that specified in the agency strategic plan, IRM strategic plan, or budget. An example of the language that might be used would be:

“This agency plans to acquire computer hardware and software capable of processing 12,000 personnel applications per year with the capability of processing each application in no more than one working day and with no expansion in the processing workforce.”

Based on this concept, the acquisition team would build detailed acquisition plans to guide the procurement of the computers and software needed to attain the one day objective.

The documentation in the next few chapters contain necessary information for the Acquisition Plan. So begin to build your contract files accordingly.

(continued on next page)

20.7 Acquisition Plans (continued)

Contents of
Written
Acquisition Plans

FAR 7.105 does set forth instructions for preparing written acquisition plans. These requirements are summarized in the table below.

FAR 7.105

AREA	DESCRIPTION
Acquisition Background and Objectives:	
Statement of need	Brief statement of need, history, alternatives, and related in-house efforts
Applicable conditions	Significant conditions such as any known cost, schedule, capability, or compatibility constraints
Cost	Cost goals with rationale, including discussion of life-cycle cost, design-to-cost, and should-cost if applicable
Capability or performance	Statement of required capabilities or performance and relationship to need
Delivery or performance-period requirements	Basis for required delivery or performance period and justification for urgency if any
Trade-offs	Expected consequences of trade-offs among cost, capability, and schedule goals
Risks	Technical, cost, and schedule risks and risk reduction plans
Acquisition streamlining	If selected by agency for streamlining, methods of involving contractors early, selecting only necessary and cost-effective requirements, and finalizing specifications and standards

(Table continued on next page)

20.7 Acquisition Plans (continued)

AREA	DESCRIPTION
Plan of action:	
Sources	Prospective sources of supply and summary of market research
Competition	Methods of seeking, promoting, and sustaining competition; authority if using other than full and open competition; major components, spare parts, and subcontracting plans
Source-selection procedures	Schedule and methods for proposal submission and evaluation and relationship of evaluation plan to objectives
Contracting considerations	Contract type, use of options or multiyear contracting, special clauses or solicitation provisions, FAR deviations, sealed bidding or negotiation, lease or purchase, etc.
Budgeting and funding	Method of estimating and schedule for obtaining funds
Product descriptions	Product description types to be used
Priorities, allocations, and allotments	Methods and reasons for using priorities, allocations, and allotments (more often applies to DoD)
Contractor versus Government performance	Consideration given to OMB Circular A-76 procedures
Management information requirements	Management systems to be used to monitor contractor's effort
Make or buy	Consideration given to make-or-buy programs
Test and evaluation	Federal and contractor test and evaluation programs
Logistics considerations	Support assumptions; reliability, maintainability, and quality assurance requirements; warranties; requirements for contractor data and data rights; standardization concepts
Government-furnished property	Any property to be furnished contractors, incl. material and facilities
Government-furnished information	Any Government information, such as manuals, drawings, and test data, to be furnished contractors
Environmental considerations	Environmental issues, impact statements, or requirements
Security considerations	Security methods, including establishment maintenance, and monitoring
Other considerations	Energy conservation, industrial readiness, Defense Production Act, Occupational Safety and Health Act, foreign sales, etc., (More often applies to DoD).
Milestones	Acquisition plan approval; statement of work; specifications; data requirements; completion of solicitation; purchase request; justification and approval for other than full and open competition; D&F approvals; issuance of synopsis; issuance of solicitation; evaluation of proposals, audits, and field reports; beginning and ending of negotiations; contract preparation, review, and clearance; contract award; and others as appropriate
Identification of participants in acquisition plan preparation	Listing of individuals who participated in the development of the acquisition plan

SUMMARY

In this chapter you learned to identify and explain FIP resources budget procedures. In the next chapter, you will learn to demonstrate the purpose of a FIP resource requirements analysis.

CHAPTER 21

THE PURPOSE OF A FIP RESOURCES REQUIREMENTS ANALYSIS

Chapter Vignette

“You can see” Marcia continued, “that a great deal of planning must go into a FIP resource acquisition. The planning is quite broad initially, but becomes much more detailed, especially in the requirements analysis.”

“Wait a minute,” said Mark. “Is this requirements analysis some tricky procedure that I have to do alone?”

“No,” continued Marcia. “Since a major part of planning is the requirements analysis, it involves several key people such as the ‘Trail Boss,’ the program manager, and technical experts from the requiring activity. You must understand what they are doing, why they are doing it, and how it will affect the acquisition. You need to be prepared to advise the acquisition team.”

Course Learning Objectives

At the end of this chapter, you will be able to:

Overall:

Explain the purpose of a FIP resources requirements analysis.

Individual:

- 21.1 Discuss the purpose of a requirements analysis.
- 21.2 Explain the effect of the following key statutes on the requirements analysis:
 - Smith-Fess Act of 1920
 - Rehabilitation Act of 1973, as amended
 - Rehabilitation Act of 1988
 - Telecommunications Accessibility Enhancement Act of 1988
- 21.3 Distinguish the roles of the FIP resource acquisition team.
- 21.4 Identify the potential contributions of the Contracting Officer to the needs determination and analysis of requirement in an oversight capacity

Chapter Overview

Scope

This chapter discusses the purpose of a FIP resource requirements analysis. A requirements analysis is a critical part of the overall acquisition planning done by the requiring Federal agency. You will see that a thorough requirements analysis is essential to justify the acquisition and establish the foundation for the solicitation.

You need to be aware that if a requirements analysis is not done properly and thoroughly, agency program or technical personnel may jump to a solution (specify an acquisition) without fully considering what the requirements are.

For example, a requiring agency may determine that it has a “compatibility-limited requirement” and must acquire a FIP resource that is 100 percent compatible with equipment already on hand. If this type of determination is made, the requiring agency **MUST** fully support this need in a requirements analysis that conforms to FIRMR 201-20.1, especially provisions in 201- 20.103-4.

As a contracting officer or contract specialist, *you cannot automatically rely on the requiring activity or technical advisors to conduct a thorough requirements analysis without some guidance.* You must understand what happens in a requirements analysis and be able to examine and critique the results of the requirements analysis.

This chapter introduces the requirements analysis. Further detail on the content of a requirements analysis follows in Chapter 22, “Content of a Requirements Analysis.” In Chapter 24, “Analysis of a Requirements Analysis,” you will learn how to critique a requirements analysis.

Chapter Overview *(continued)*

References

To understand and perform the procedures in this chapter, you may need to refer to one or more of the following references:

- FAR 6.303, 6.304, 7.103 and 7.104
- FIRMR 201-20.1
- The Smith-Fess Act of 1920
- The Telecommunications Accessibility Enhancement Act of 1988
- The Rehabilitation Act of 1973, as amended
- The Rehabilitation Act of 1988
- OMB Circulars A-11, *Preparation and Submission of Budgets*, and A-130, *Management of Federal Information Resources*.
- GSA's *Overview Guide: Acquisition of Information Resources*

Topics Covered in this Chapter

This chapter contains the following topics:

SECTION	TITLE	PAGE
21.1	Purpose of a FIP Resource Requirements Analysis	21-5
21.2	Effect of Key Statutes on the Requirement Analysis	21-9
21.3	Roles of the FIP Resource Acquisition Team	21-11
21.4	Contributions of the Contracting Officer in an Oversight Capacity	21-13

21.1 Purpose of a FIP Resource Requirements Analysis

Origin of the Requirements Analysis

The rules dictating requirements analysis are based on a fundamental precept of contracting—that *needs are determined before goods and services are bought*.

FAR 7.102 and 7.103

This precept is represented in FAR 7.103(b) which requires agency heads to ensure “that acquisition planners address the requirement to specify needs, develop specifications” and solicit offers competitively where possible and “with due regard to the nature of the supplies or services to be acquired.” In addition, FAR 7.102 indicates that the “purpose of this [acquisition] planning is to ensure that the Government meets its needs in the most effective, economical, and timely manner.”

FAR 7.104

FAR 7.104 establishes that “acquisition planning should begin as soon as the agency need is identified.” It discourages issuing requirements on an urgent basis, since that generally restricts competition and raises prices. It encourages close cooperation among the contracting officer, planner, technical experts, and logistics personnel, such as facilities engineers.

Purpose of a FIP Resource Requirements Analysis

This general requirement to determine needs is refined in the FIRMR. FIRMR 201-20.1 explains that the purpose of the requirements analysis is to determine and document requirements for FIP resources. *It provides the basis on which the alternatives for meeting the requirements can be analyzed.* It is therefore a process for the agency to identify its needs in terms of the mission, objectives, and functions which it must perform.

FIRMR 201-20.1

[Note: You will learn more about the analysis of alternatives, the process following the requirements analysis, in Chapter 26, “The Purpose and Content of an Analysis of Alternatives.”]

The requirements analysis is the basis on which alternatives are analyzed and specifications are developed. In fact, these requirements are the foundation for the entire acquisition including the eventual selection of one alternative as most advantageous to the Government. These requirements are important even after contract award, since they help determine during contract administration if the agency’s needs are being met on a continuing basis.

(Topic continued on next page)

21.1 Purpose of a FIP Resource Requirements Analysis *(continued)*

Purpose of a
FIP Resource
Requirements
Analysis
(continued)

A good requirements analysis begins with a look at the strategic plan and the status quo. From the current system or program, agency planners identify problems and convert them into objectives for the new system, consistent with strategic plans.

Therefore, the purpose of a requirements analysis is to answer questions such as:

- What is our current function and mission?
- What are our strategic objectives?
- What information do we need?
- What is the current system and how effective is it?
- What are our problems?
- What do we need in the future?
- How much of the future are we planning for?

You can see that the answers to these questions change over time.

Effect of Systems
Life on
Requirements
Analysis

You should also realize that the answers may change depending on “how much of the future” is being considered. We call this the *systems life*.

If, for example, an agency has an outdated system and the timeframe for action is short, the agency could decide that its requirement is for a *noncompetitive* engineering upgrade to the current system. However, using a larger timeframe, the agency could determine that the outdated system will not meet agency requirements over a five year systems life and, further, is an impediment to competition. In this case, the agency’s requirement might be for a competitive replacement of the installed system.

Unless a requirements analysis is thorough and complete, it may limit competition unreasonably. Then the agency would not be able to select the single alternative which is most advantageous to the Government.

(continued on next page)

21.1 Purpose of a FIP Resource Requirements Analysis *(continued)*

Effect of
Requirements
Analysis on
Competition

FAR 6.303 and 6.304

In the engineering upgrade example discussed above, the requirements analysis led to the conclusion that only the manufacturer could meet the agency's short-term requirement. This conclusion would be critical to the acquisition, because it would limit competition and require detailed justification to comply with the *noncompetitive* justification requirements of FAR 6.303 and 6.304.

If agency management or the contracting office question the short-term, noncompetitive nature of the solution, the program and technical staff might have to reevaluate their conclusions, causing delay in the acquisition process.

FIRMR
201-20.103-4

Requirements analyses that result in *compatibility-limited* requirements also require special justification. FIRMR 201-20.103-4 directs that agencies limit compatibility-limited requirements to those necessary to satisfy agency needs. It also specifies that *compatibility-limited requirements must be justified on one of two grounds:*

- agency technical or operational requirements for compatibility when adding to or replacing installed FIP resources, OR
- great risk and impact of conversion failure.

Unfortunately, it is very easy to rely too readily on specific make and model or compatibility-limited requirements. Unless the requiring agency proceeds through a structured requirements analysis, specific acquisitions may not support the agency's strategic objectives and program goals—nor comply with the statutory mandate for competition.

To avoid unnecessarily limiting competition, agencies should state requirements in terms of the functions to be performed or the required results, rather than how functions will be accomplished or results achieved. Stating requirements in functional terms permits consideration of the broadest possible range of solutions.

So you can see that if the requirements analysis is not properly and thoroughly performed, the agency may not have sufficient justification for limiting competition and could lose valuable time in the acquisition process. These problems can be avoided if requirements are stated functionally and if senior management and the contracting office participate in or monitor the development of the requirements analysis.

(continued on next page)

21.1 Purpose of a FIP Resource Requirements Analysis *(continued)*

No Overall Exceptions

There are no exceptions to the overall requirement that agencies conduct a requirements analysis before buying FIP resources. This makes sense when you consider the fundamental need for determining *what to buy before you buy it*.

However, the FIRMR does provide for some exceptions to the content of a requirements analysis. For example, although there is a mandatory requirement to justify specific make and model requirements, this requirement is excepted under certain circumstances. You will learn more about this in the next chapter.

Critical Part of Acquisition Planning

The requirements analysis is thus a very critical part of acquisition planning. It establishes both the means of achieving strategic goals and lays the foundation for the rest of the acquisition.

21.2 Effect of Key Statutes on the Requirements Analysis

Key Statutes Influencing the Requirements Analysis

You should know that several statutes influence the requirements analysis with regard to providing tools needed for job performance to persons with disabilities. This is called “accessibility.” These key statutes include:

- *Smith-Fess Act of 1920*
- *Rehabilitation Act of 1973, as amended*
- *Telecommunications Accessibility Enhancement Act of 1988*
- *Rehabilitation Act of 1988*

Smith-Fess Act of 1920

Although the *Smith-Fess Act of 1920* was passed long before computers, it influences the requirements analysis because it was the first law to require planning for vocational training for injured and disabled workers to return them to productive participation in the work force. Later laws and regulations concerning training and job access for the handicapped grew out of this early law. Now Federal and state agencies must consider use of technology—and provide access to that technology—for all workers, including the disabled.

Rehabilitation Act of 1973, as amended

The *Rehabilitation Act of 1973* requires all agencies to develop “comprehensive and continuing plans” to help handicapped individuals “prepare for and engage in gainful employment.” Further, agencies must “promote and expand employment opportunities” and “place such individuals in employment.”

In 1986, this law was reauthorized and amended by the *Rehabilitation Act Amendments of 1986* (P.L. 99-506) to add section 508 on electronic equipment accessibility. Its purpose is “to insure that handicapped individuals may use electronic office equipment with or without special peripherals.” Congress mandated that guidelines for electronic equipment accessibility be established and that agencies comply with the guidelines.

This law is the statutory basis for the mandatory provision in FIRMR 201-20.103-7 that requirements analyses address accessibility requirements for the disabled.

(continued on next page)

21.2 Effect of Key Statutes on the Requirements Analysis *(continued)*

Rehabilitation Act
of 1988

The *Rehabilitation Act of 1988* influences agency planning and requirements analysis because it requires “*rehabilitation engineering*”—the systematic application of technologies, engineering methodologies, or scientific principles to address the barriers confronted by individuals with handicaps. This clearly includes consideration of disabled individuals in a requirements analysis for a FIP resource acquisition.

Telecommunica-
tions Accessibility
Enhancement Act
of 1988

The *Telecommunications Accessibility Enhancement Act of 1988* also influences the requirements analysis. It requires that Federal agencies take necessary actions to assure that the Federal telecommunications system is *fully accessible* to hearing-impaired and speech-impaired individuals.

It also defines the term *Telecommunications Device for the Deaf (TDD)* as a machine which employs graphic communications in the transmission of coded signals through the nationwide telecommunications system.

Assistance with
Rehabilitation Act
Requirements

FIRMR Bulletins C-8 and C-10

Because of these laws and because computers can expand the capabilities of the disabled, GSA issued FIRMR Bulletins C-8, *Information accessibility for employees with disabilities*, and C-10, *Telecommunications accessibility for hearing and speech impaired individuals*. You will learn more about these and other sources of accessibility information in the next chapter.

21.3 Roles of the FIP Resource Acquisition Team

The FIP Resource Acquisition Team

Reminder: Although the roles of personnel have been previously discussed, it is imperative that the RA be developed with participation of all parties. The size of the FIP resource acquisition affects the size and the composition of the FIP resource acquisition team. If the FIP acquisition is very large and complex, there may be many individuals who must coordinate in the development of the requirements analysis and other aspects of acquisition planning. Contracting personnel are normally involved early in planning for major buys.

On the other hand, if the FIP resource acquisition is relatively small and not very complex, you may see the requirements analysis, but not deal with those responsible for its development. In the smallest buys, you may only see the requisition, not the requirements analysis.

Nonetheless, you need to know about the key persons and their roles and responsibilities in developing the requirements analysis and the overall acquisition plan. This is because contracting staff are most effective when knowledgeable about the reasons for the acquisition.

Roles of Key Individuals

Because FIP resource requirements are tied to the overall strategic plan, you will find that several key individuals may have important roles and responsibilities.

These key individuals may include a “Trail Boss,” a Program Manager, the requiring agency’s information resources manager (IRM) as well as the contracting officer. Keep in mind that the Program Manager could be a “Trail Boss.” You may deal with one or all of these, depending on the size of the FIP resource acquisition. Key individuals’ roles and responsibilities are detailed in the paragraphs and table that follow.

21.3 Roles of the FIP Resource Acquisition Team *(continued)*

Trail Boss

In very complex and expensive FIP system acquisitions, such as major FIP system modifications, you may find that the requiring agency assigns a “Trail Boss” in accordance with FIRMR Bulletin C-7 to guide the overall acquisition.

The Trail Boss, a high-level acquisition manager, works closely with the contracting officer and others to ensure that all aspects of acquisition planning, including the requirements analysis and justifications, have been met.

Remember that the Trail Boss is a carefully selected individual who has been through a special GSA training program. He or she knows a great deal about both the specific FIP resource requirement and the Federal acquisition process and can provide knowledgeable assistance and guidance throughout the course of the acquisition.

DOD Program Manager

In those cases where the large scale acquisition concerns a DOD agency, you may find that a DOD Program Manager is also involved in acquisition planning and the requirements analysis. The DOD Program Manager is an expert on the special program requirements, but not necessarily in either FIP resources or the acquisition process. In such cases, the DOD Program Manager will normally be assisted by an Information Resource Manager.

Information Resource Manager

Whether or not a Trail Boss is appointed, you may encounter another key individual in a FIP resource acquisition—the Information Resource Manager (IRM). The IRM assists the program manager and acts as the technical advisor in developing strategic, mid range and short range requirements for FIP resources. You may work closely with this individual concerning the requirements analysis and technical aspects of the acquisition.

21.3 Roles of the FIP Resource Acquisition Team *(continued)*

Key Participants The following table summarizes the key roles and responsibilities of those involved in planning and developing the requirements for the acquisition.

Key Participants' Planning Roles and Responsibilities	
Program Manager (PM)	Originates the requirement for FIP resources. Together with the IRM, develops long range, mid range and short range FIP requirements and acquisition plans for meeting FIP requirements. Coordinates with CO; requests Delegation of Procurement Authority (DPA); directs preparation of procurement request(s), Independent Government Estimates (IGE), and market surveys; and prepares justifications. <i>May be a Trail Boss.</i>
Information Resources Manager (IRM)	Assists the PM and acts as technical advisor to the requiring office to develop long range, mid range and short range requirements and acquisition goals. Prepares the Agency Procurement Request (APR), writes the Statements of Work (SOW) and specifications. Develops source evaluation criteria and evaluation factors.
Contracting Officer (CO)	Coordinates all procurement activities. Advises PM. Prepares Acquisition and Source Selection Plan. Prepares and publicizes solicitation.

21.4 Contributions of the Contracting Officer in an Oversight Capacity

Role of Contracting Officer

As the contracting officer or contract specialist, you may work closely with any of these individuals, but remember that it is the contracting officer's responsibility to coordinate all the procurement activities. This includes acting in an "oversight capacity," advising members of the FIP resource acquisition team, and raising questions concerning deficiencies in the requirements analysis, justifications, or other documents.

You should also know that the contracting officer can make many contributions to the needs determination and analysis of requirements while acting in an oversight capacity. *In fact, it is your role to be a positive contributor to the team's effort.*

Although you are not expected to be an expert in the technical aspects of FIP resources, you may contribute to the needs determination and analysis of requirements in several ways. These include:

- advising other members of the team on the use of applicable IRM standards and specifications they should research;
- explaining the impact of the statutes, OMB circulars and policy which must be followed, including the minimum mandatory considerations which must be included in the requirements analysis;
- explaining the special requirements of the Federal acquisition process, including lead times for negotiated procurements, and requirements for any justifications, such as compatibility-limited requirements; and
- explaining sources of possible assistance, such as GSA's guidebooks and Office of Technical Assistance.

You will learn more about contributing to the development of a requirements analysis in Chapter 22, "Content of a Requirements Analysis," and Chapter 24 "Analysis of a Requirements Analysis."

GSA's Planning Support

Note that your agency can get planning assistance from GSA's Office of Technical Assistance on a cost-reimbursable basis.

SUMMARY

In this chapter, you learned about the purpose of a FIP resource requirements analysis. In the next chapter, you will learn about the contents of a requirements analysis and how to determine if the mandatory and nonmandatory requirements are included in the requirements analysis.

CHAPTER 22

CONTENT OF A REQUIREMENTS ANALYSIS

Chapter Vignette

“I can appreciate the need for a requirements analysis,” Mark said. “It is much more than a few lines of text explaining the need for the acquisition. I’m glad I’ll have so much high-powered help.”

“You bet,” Marcia said. “There will be plenty of high level involvement, but you must understand the FIRMR requirements. There are special requirements, such as considering accessibility for the handicapped. Program and technical staff are sometimes unaware of or forget these requirements because they are so focused on the technical needs. You need to make sure these special requirements are not overlooked.”

Course Learning Objectives

At the end of this chapter, you will be able to:

Overall:

Understand and discuss the mandatory and nonmandatory content of a requirements analysis.

Individual:

- 22.1 Distinguish some fundamental principles necessary in developing a requirements analysis.
- 22.2 Identify mandatory factors to consider when determining information resources requirements.
- 22.3 Identify nonmandatory factors to consider when determining information resources requirements.

Chapter Overview

Scope

You learned in the last chapter that agencies often have their own rules for developing requirements analyses. You also learned that sometimes the nature of the acquisition determines what should be considered in a requirements analysis. And finally, you learned that the FIRMR mandates specific considerations for a requirements analysis for FIP resources.

You also learned that although the FAR requires that agencies identify and specify needs, the mandate for a requirements analysis per se originates in the FIRMR.

This chapter explains the FIRMR's mandatory considerations for inclusion in a requirements analysis and describes what's intended and how to address them.

This chapter also explains certain nonmandatory factors to consider when determining information resource requirements, and explains that standards should be considered as part of the requirements analysis.

References

You may need to refer to the following references to understand the fundamentals of requirements analysis.

- FIRMR 201-20.1, *Requirements Analysis*
- GSA's handbook, *A Guide for Requirements Analysis and Analysis of Alternatives*
- GSA's Office of Technical Assistance (OTA) guides, *Performing a Requirements Analysis for Acquisition of Federal Information Processing Equipment* and *A Guide to Alternative Requirements Analysis Methodologies*

You can reach GSA's IRM Reference Center on (202) 501-4860 and OTA on (703) 756-4100.

Additional references, pertinent to the topic being discussed, are indicated throughout this chapter.

Chapter Overview *(continued)*

Topics in This Chapter

This chapter includes the following topics:

SECTION	TITLE	PAGE
22.1	Fundamental Principles	22-5
22.2	Identify mandatory factors to consider when determining information resources requirements	22-8
22.3	Identify nonmandatory factors to consider when determining information resources requirements	22-27

22.1 Fundamental Principles

Basic Need

FAR 7.103 and 7.104

As you learned in the previous chapter, the FAR addresses a fundamental precept of contracting—that *needs are determined before goods and services are bought*.

Specifically, FAR 7.104 indicates that “acquisition planning should begin as soon as the agency need is identified.” FAR 7.103 requires agency heads to ensure that acquisition planners “specify needs.”

You now know that although the FAR requires that agencies identify and specify needs, *the mandate for a “requirements analysis” originates in the FIRMR*. FIRMR 201-20.001 describes the requirements analysis as the “beginning” of an acquisition.

The FIRMR’s Principles

FIRMR 201-17.001

FIRMR 201-17.001, *Predominant Considerations*, establishes some of the fundamental principles that apply to the acquisition of FIP resources in general, including the development of a requirements analysis. They include the need for agencies to:

- Base requirements for FIP resources on agency mission, programs, and related information needs;
- Consider using advanced technology to enhance future program performance in support of the agency’s mission;
- Achieve full and open competition to the maximum extent practicable;
- Acquire resources that comply with federal standards;
- Provide for security of resources, protection of information about individuals, continuity of operations, and national security and emergency preparedness;
- Provide individuals with disabilities equal access to electronic office equipment;
- Provide telecommunications access to hearing and speech impaired individuals; and
- Acquire microcomputers, monitors, and printers that are energy efficient.

(Topic continued on next page)

22.1 Fundamental Principles *(continued)*

The FIRMR's
Principles
(continued)

So you can see that these considerations address more than specific requirements for an individual acquisition: they also require agencies to consider fundamental statutory policies like the need for ensuring competition, protecting privacy and security, and complying with standards.

As you read through the following sections, remember that the FIRMR's requirements analysis provisions address *management* issues as well as *acquisition* issues. The management issues are related to life cycle planning. The acquisition issues relate to the procurement requirements. As a contract specialist, you're not just buying FIP resources, you are managing FIP resources. In fact, some of the provisions provide information unrelated to the completion of the requirements analysis.

*Once you understand that the requirements analysis is used to establish needs **and** establish the agency's compliance with the law in meeting those needs, you have understood the essential nature of the requirements analysis.*

FIRMR 201-20.103-3

FIRMR 201-20.103-3 reiterates and builds on the predominant considerations by establishing certain principles that agencies must follow when describing their needs. These principles require agencies to:

- Base requirements on mission needs;
 - Express needs in terms of increasing economy and efficiency, meeting new or changed program requirements, or correcting deficiencies in existing capabilities;
 - Describe requirements functionally to the extent possible;
 - Use restrictive requirements only when necessary to satisfy the agency's needs;
 - Describe requirements to obtain full and open competition or justify other than full and open competition as required by the FAR;
 - Document both quantitative or qualitative requirements needed to meet mission needs; and
 - Consider aggregating requirements.
-

(continued on next page)

22.1 Fundamental Principles *(continued)*

Size of the
Requirements
Analysis

FIRMR Part 201-20.102

FIRMR 201-20.102 requires agencies to establish and document requirements for FIP resources by conducting a requirements analysis *commensurate with the size and complexity of the need*. So the content of the requirements analysis varies according to the size and complexity of the FIP resource acquisition.

If the acquisition is large and complex, the requirements analysis may be very extensive and involve many people. It may even be “contracted out” to a private sector firm specializing in requirements development or systems integration. The result may be a large and complex document produced over a period of several months or more.

On the other hand, if the FIP resource acquisition is fairly simple and straightforward, the requirements analysis may be a much smaller document produced with a few days of work “in house” by technical personnel from the requiring agency.

So you must understand that the requirements analysis must fit the procurement in terms of depth, complexity, length, and content.

22.2 Mandatory Factors to Consider When Determining Information Resources Requirements

FIRMR Requirements

FIRMR 201-20.1

As you know, FIRMR 201-20.1 explains that a requirements analysis is used to determine and document requirements for FIP resources. It also requires that a “requirements analysis shall include, *at a minimum*, consideration of the following factors” —

1. Information needs;
2. System life;
3. Description of requirements;
4. Justification and approval for any compatibility-limited requirements;
5. Justification and approval for any specific make and model requirements;
6. Security requirements;
7. Accessibility requirements for handicapped individuals;
8. Space and environmental requirements;
9. Workload and related requirements;
10. Records management requirements; and
11. Energy efficiency requirements for microcomputers.

These requirements are sometimes called “mandatory” requirements, but that is not entirely accurate. For example, if you are buying just support services, you generally do not need to address “energy efficiency requirements for microcomputers.” You need to think of these requirements as *mandatory to the extent that they apply to your acquisition*.

(Topic continued on next page)

22.2 Mandatory Factors to Consider When Determining Information Resources Requirements *(continued)*

FIRMR
Requirements
(continued)

The table below summarizes the FIRMR's requirements for the requirements analysis and provides the FIRMR reference.

SUMMARY OF FIRMR REQUIREMENTS	
REQUIREMENTS ANALYSIS	FIRMR
Described in terms of: Mission Need Functional and performance needs Full and open competition	201-20.103-3(a) 201-20.103-3(b) 201-20.103-3(c)
Addressing: Information needs Systems life Quantitative and qualitative requirements Aggregating requirements Security and privacy Accessibility requirements for disabled Space and environment Workload, current and projected, including: Contingency requirements Records management Energy efficiency for microcomputers Standards	201-20.103-1 201-20.103-2 201-20.103-3(d) 201-20.103-3(e) 201-20.103-6 201-20.103-7 201-20.103-8 201-20.103-9 201-20.103-9(d) 201-20.103-10 201-20.103-11 201-20.303
Justifying if: Specific make and model Compatibility-limited Other than full and open competition	201-20.103-5 201-20.103-4 201-20.103-3(c)

The following sections address these requirements in greater detail, suggesting when and how they might apply. The FIRMR provisions are quoted in bold type, followed by discussion and interpretation of the requirement.

22.2 Mandatory Factors to Consider When Determining Information Resources Requirements *(continued)*

Information Needs

FIRMR 201-20.103-1

Agencies shall determine their information needs by considering —

- (a) Their need to provide information to and obtain information from the public and other agencies;**
- (b) Available sources of information;**
- (c) Information format, media, quantity, integrity, security, and timeliness requirements;**
- (d) Essential records and information required to support current and future program and mission needs;**
- (e) Agency records retention and disposition requirements and the need to assure archival acceptability of permanent or long-term records;**
- (f) The integration of electronic records with other agency records; and**
- (g) Existing or planned intra or interagency operability requirements.**

This requirement is based on the policies of the *Paperwork Reduction Act* and OMB Circular A-130, which emphasize that information is a resource to be managed. If you look at this requirement closely, you will understand that some have more to do with agency management than the acquisition of specific FIP resources.

The requirement in FIRMR 201-20.103-1 to address information needs is most applicable to the acquisition and management of large systems, especially those which involve systems integration, facilities management, or systems development support services. Nonetheless, if special information needs are related to and are a part of the acquisition at hand, those needs should be documented as part of the requirements analysis.

For example, acquisitions for desktop computing hardware and software may include requirements for the form and format of information, such as the ability to create files in a specific format, or the media to be used, such as 3.5" high density disks.

(Topic continued on next page)

22.2 Mandatory Factors to Consider When Determining Information Resources Requirements *(continued)*

Information Needs (continued)

To determine their information requirements, agencies should consider:

- What information is currently received?
 - What additional information is needed?
 - What are the sources of the information?
 - What information is provided to public and private sector users?
 - Where is the information needed?
 - What additional information should be provided?
 - How is the information interrelated or related to information outside the system?
 - How will the information be acquired and disbursed?
 - How much information is needed?
 - How will the information be maintained and its security, confidentiality, accuracy, and completeness assured?
 - What timeliness is required for the information?
 - How must the information be formatted?
-

System Life

FIRMR 201-20.103-2

Agencies shall establish a system life as a part of the requirements analysis. If the acquiring activity can predict reuse of the FIP resource by another component within the agency after it no longer meets the acquiring activity's needs, the reuse period shall be included in the system life.

The system life, defined in FIRMR 201-4.001, is *a projection of the time period that begins with the installation of the FIP resource and ends when the agency's need for that resource has terminated*. A system life should be established for every acquisition.

The system life answers the question: *How long will the acquired resources satisfy the user?* In some cases, the user may believe that the computer (or other FIP resource) can meet all requirements for many months (with or without upgrades). In other cases, it may be obvious that the acquisition will only be a "stopgap" measure to meet a requirement for a few years or even a few months. The system life is usually expressed in months: *"We estimate that this acquisition will satisfy this agency's requirements for 60 months."*

(Topic continued on next page)

22.2 Mandatory Factors to Consider When Determining Information Resources Requirements *(continued)*

System Life (continued)

Factors that can affect the system life determination include:

- Users' projected needs in general,
- The rate of advancing technology,
- The probability of continued support,
- Lead time required to conduct replacement procurements, and
- Reassignment and reuse.

You should be aware that agencies do not normally include reuse in the systems life, because it cannot be predicted with relative certainty. You should also be aware that although system lives have traditionally been around eight years, technology life cycles are now shorter. System lives of five and even two or three years are more common.

The system life is established so that the agency can analyze alternatives that will meet its needs over a set period of time. For example, if the agency wants to compare the costs of leasing and purchasing, the agency's costs over the same period of time are compared.

As you learned in the last chapter, the *systems life can affect the competitiveness of alternatives available to the agency.*

Description of Requirements

FIRMR 201-20.103-3

Agencies shall —

- (a) Base requirements on mission needs expressed in the form of opportunities for increased economy and efficiency, new or changed program requirements, or deficiencies in existing capabilities;**
- (b) Describe requirements in terms of functions to be performed and performance to be achieved, unless a more restrictive statement of requirements is necessary to satisfy the agency's needs;**
- (c) Describe requirements in a manner that will attain full and open competition when contracting for FIP resources unless other than full and open competition is justified in accordance with subpart 201-39.6 and FAR part 6;**

(Topic continued on next page)

22.2 Mandatory Factors to Consider When Determining Information Resources Requirements *(continued)*

Description of
Requirements
(continued)

- (d) **Document in the requirements analysis the quantitative or qualitative requirements that must be met and why those requirements are necessary to meet the mission needs; and**
- (e) **Consider aggregating requirements on organizational or functional bases and conducting a requirements analysis on the basis of the aggregated requirements.**

This is the heart of the requirements analysis—the description of requirements. This section, more than any other, seeks to answer:

- What is our function and mission?
- What is the shortfall in meeting our function and mission?
- What are our strategic objectives?
- What is the current system and how effective is it?
- What resources do we need?
- What are our problems?
- What do we need in the future?

The FIRMR establishes certain standards for the way in which requirements are expressed. These include the mandates that agencies:

- Relate requirements to mission need
- Establish basis for need in performance terms
- Describe needs functionally
- Describe needs to obtain full and open competition
- Describe quantitative and qualitative needs
- Aggregate requirements

(Topic continued on next page)

22.2 Mandatory Factors to Consider When Determining Information Resources Requirements *(continued)*

Description of Requirements
(continued)

Relate requirements to mission need. “Mission needs” link the required resource to the mission of the organization.

For example, in the DoD, the acquisition of handheld computers relates to the agency’s:

- Strategic mission of *maintaining armed service personnel, equipped with the necessary tools, in combat-ready status*, and
- Strategic IRM objectives by *ensuring ready information and communications in the field by equipping combat troops with handheld computers*.

For the Internal Revenue Service, the acquisition of telecommunications and software resources for electronic tax return filing relates to the agency’s:

- Strategic mission of collecting taxes from individuals and businesses, and
- Strategic IRM objective of using technology to support the efficient, effective, and timely collection of tax information.

This satisfies requirements of law, policy, and regulation by linking procurements to agency plans.

Establish basis for need in performance terms. Not only must agencies express needs in terms of mission, they must justify acquisitions in terms of:

- Increasing economy and efficiency,
- Meeting new or changed programs requirements, or
- Correcting deficiencies in existing capabilities.

By this means, agencies establish discrete objectives for their acquisitions. Although this FIRMR requirement predates the *Government Performance and Results Act of 1993* (discussed in Chapter 20), it correlates nicely with the law. When agencies establish performance objectives for their procurements, the acquisition can be structured to meet the objectives and contractors can be measured against those objectives.

(Topic continued on next page)

22.2 Mandatory Factors to Consider When Determining Information Resources Requirements *(continued)*

Description of Requirements (continued)

For example, the acquisition of handheld computers could be justified in terms of increasing ground troops' *efficiency* by enabling faster reaction to enemy troop movement; meeting new *program requirements* to remain militarily competitive by employing current technology; and improving the strategic-to-tactical command chain by correcting information-flow *deficiencies*.

When developing performance objectives—sometimes called performance metrics—agencies should consider measures that address *quality, timeliness, and price*. If your acquisition is significant (in terms of dollars or criticality) and will require a delegation of procurement authority, GSA may require this information. You will learn more about this in Chapter 37, *Delegations of Procurement Authority and Procedures for Preparing an Agency Procurement Request (APR)*.

Describe needs functionally. The FIRMR establishes a preference for describing requirements functionally. This means that agencies should describe the functions to be performed or the results to be achieved—rather than the equipment to be acquired or the means of performance. By describing requirements in functional or performance terms, needs are analyzed rather than solutions.

For example, the requirement for handheld computers could be described *functionally* as “light weight handheld devices and capable of real-time transmission of logistical, command, and weather information.” Contrast this to a requirement for “XYZ Model 4.1 Handheld Computers.” More often you will get a combination such as the first one above.

The less agencies specify a solution, the more competitive the procurement is.

Describe needs to obtain full and open competition. This requirement relates to and expands on the requirement to express needs functionally. To illustrate, the functional requirement for “handheld devices weighing two pounds or less and capable of real-time transmission of logistical, command, and weather information” could be restrictive if only one manufacturer made a unit weighing under two pounds.

(Topic continued on next page)

22.2 Mandatory Factors to Consider When Determining Information Resources Requirements *(continued)*

Description of Requirements
(continued)

Agencies must make every effort to develop requirements which are not restrictive *unnecessarily*. After all, there are legitimate reasons to use restrictive specifications, but such use must be justified.

Describe quantitative and qualitative needs. The FIRMR implements the policies of the Office of Federal Procurement Policy (OFPP) by encouraging agencies to describe qualitative as well as quantitative needs. Although quality is normally more important in services procurements, it can apply to equipment buys as well.

For example, the requirement for handheld computers might be expressed in terms of many quantitative measures: number needed, transmission and reception range, and memory size to name a few possibilities. However, the agency might also devise some qualitative measures, such as ease of use or ruggedness as tested in varying circumstances.

Agencies must take care not to prejudice selection with qualitative “needs.” If the qualitative requirements limit or restrict the competitiveness of the solution, the relationship of the requirement to the mission should be clear and the need compelling and justified. Furthermore, if the qualitative requirements are critical or are a part of a large acquisition, the agency should plan for evaluation, selection, acceptance, and performance monitoring after award to assure that qualitative objectives are achieved.

Aggregate requirements. To aggregate requirements means to combine similar requirements into a larger procurement. An agency-wide microcomputer contract is an example of highly aggregated requirements.

Aggregating requirements can result in efficiencies and economies of scale; therefore, agencies are required to consider the possibility and effect of aggregation.

However, agencies should be aware that aggregating requirements can also result in “blended specifications” that fail to meet all users’ needs or provide more capability at a higher cost than low-end users need. Aggregating procurements can also cause delays while large procurements are put together.

This decision should be carefully considered by agency IRM, program, contracting, and executive management.

(continued on next page)

22.2 Mandatory Factors to Consider When Determining Information Resources Requirements *(continued)*

Compatibility-
Limited
Requirements

FIRMR 201-20.103-4

-
- (a) Agencies shall establish compatibility-limited requirements for FIP resources only to the extent necessary to satisfy the needs of the agency.
 - (b) Agencies shall justify compatibility-limited requirements for FIP resources on the basis of at least one of the following:
 - (1) The agency has technical or operational requirements for compatibility when adding resources to, or replacing a portion of, an installed base of resources, and the agency determines that replacing additional portions of the installed base to avoid compatibility-limited requirements is not advantageous to the Government; or
 - (2) The agency determines that the risk and impact of a conversion failure on agency critical mission needs would be so great that acquiring non-compatible resources is not a feasible alternative.

According to FIRMR 201-4.001, a compatibility-limited requirement is *a statement of FIP resources requirements expressed in terms that require the items to be compatible with existing FIP resources.*

Compatibility-limited requirements require a justification, based on one of the two reasons cited above, to comply with the FIRMR. This is a special FIRMR justification requirement: compatibility-limited buys are justified under the FIRMR, not the FAR's "other than full and open competition" requirements.

Note that a compatibility-limited requirement may require a conversion study in accordance with FIRMR 201-20.203-4.

(continued on next page)

22.2 Mandatory Factors to Consider When Determining Information Resources Requirements *(continued)*

Justification for
Specific Make and
Model

FIRMR 201-20.103-5

Technical and requirements personnel shall justify a requirement that can only be met by specific make and model resources in accordance with subpart 201-39.6.

FIRMR 201-4.001 describes a specific make and model specification as a *description of the Government's requirement for FIP resources that is so restrictive that only a particular manufacturer's products will satisfy the Government's needs, regardless of the number of suppliers that may be able to furnish that manufacturer's products.*

Acquisitions that use *specific make and model descriptions* do not provide for full and open competition and must be justified and approved in accordance with FAR 6.303 and 6.304 and FIRMR 201-39.6. The justification is part of the requirements determination dictated by FIRMR 201-20.1.

FIRMR
Prohibition on
Justifying
Outdated
Equipment

FIRMR 201-39.602-1

As you know, FAR 6.302 identifies specific circumstances permitting other than full and open competition. One of these circumstances occurs when there is only one responsible source "in the case of a follow-on contract," as described in FAR 6.302-1(a)(2)(ii). You should be aware that the FIRMR *specifically prohibits* agencies from using this justification "to perpetuate any contract for outdated FIP equipment or for FIP equipment to be used with FIP software that requires general redesign to satisfy mission needs."

Exception to
FIRMR
Prohibition on
Justifying
Outdated
Equipment

FIRMR 201-39.602-2

However, the FIRMR provides an exception that nullifies the prohibition against using FAR 6.302-1(a)(2)(ii) to justify continuing use of outdated FIP resources supported by only one responsible source if the agency's Designated Senior Official "determines that such action will be in the Government's best interest." The FIRMR does *not* indicate that the DSO may delegate this authority.

(continued on next page)

22.2 Mandatory Factors to Consider When Determining Information Resources Requirements *(continued)*

Exception to
Justification for
Certain Multiple
Award Schedule
Buys

FIRMR 201-39.601-2

The FIRMR indicates that the requirement to justify acquisitions citing a specific make and model does *not* apply to certain orders for FIP resources placed against GSA nonmandatory FIP schedule contracts. As you may know, these orders are typically advertised in the *Commerce Business Daily* (CBD) using a specific make and model description. However, this does not mean that the agency considered its requirements noncompetitively.

The FIRMR recognizes this and does not require agencies to justify specific make and model orders off GSA nonmandatory FIP schedule contracts when:

- The statement of work or requirements documentation prepared by the technical and requirements personnel describes requirements with other than a specific make and model specification, notwithstanding the fact that when the synopsis appears in the CBD and the order is placed, a specific make and model is cited, and
- The procedures in FIRMR 201-39.803 concerning use of GSA nonmandatory schedule contracts are followed.

Guidance on competitive requirements appears in:

- the *Competition in Contracting Act* (CICA), (Pub. L. 98-369)
- FAR 7.103 and 7.104

Security
Requirements

FIRMR 201-20.103-6

Agencies shall —

- (a) Identify security and privacy requirements in the requirements analysis;**
- (b) Identify security requirements necessary to protect classified and sensitive information by listing the potential threats and hazards and describing the measures needed to provide protection; and**
- (c) Identify physical and environmental security safeguards.**

(Topic continued on next page)

22.2 Mandatory Factors to Consider When Determining Information Resources Requirements *(continued)*

Security Requirements (continued)

Agencies can go a long way toward protecting FIP resources by planning for the security of FIP resources and privacy of information before the resources are purchased. In addition to preparing broad, agency-wide plans for security and privacy, agencies should plan for security and privacy *specific to an acquisition* in the requirements determination.

Although these requirements are most applicable to large systems buys or contractor-operated facilities contracts, security and privacy concerns can affect most acquisitions. In the case of handheld computers for combat troops, the means of encrypting information to be transmitted and limiting the usefulness of the devices if captured by enemy troops are obvious concerns.

Sources of information about security and privacy include:

- The *Computer Security Act of 1987* (P.L. 100-235)
- The *Privacy Act of 1974* (P.L. 93-579)
- OMB Circular A-130, especially Appendix I, *Federal Agency Responsibilities for Maintaining Records about Individuals*, and Appendix III, *Security of Federal Automated Information Systems*
- OMB Bulletin 88-16, *Guidance for Preparation and Submission of Security Plans for Federal Computer Systems Containing Sensitive Information*
- FAR 24.104, 52.224-1, 52.224-2
- FIRMR 201-21.3, 201.39.1001 and 201-39.5205-5
- FIRMR Bulletin C-22, *Security and privacy protection of Federal information processing (FIP) resources*
- GSA's Office of Technical Assistance (OTA) publication, *Information Technology Installation Security*
- National Institute of Standards and Technology (NIST) publications, such as NIST Special Publication 800-4, *Computer Security Considerations in Federal Procurements*, and NISTIR 4749, *Sample Statement of Work for Federal Computer Security Services: For Use In-House or Contracting Out*

You can reach GSA's OTA on (703) 756-4100 and NIST on (301) 975-2822. If you need to review security and privacy considerations, see Chapter 19, *Computer Security for FIP Resources Acquisitions*.

(continued on next page)

22.2 Mandatory Factors to Consider When Determining Information Resources Requirements *(continued)*

Accessibility
Requirements for
Individuals with
Disabilities

FIRMR 201-20.103-7

-
- (a) **Agencies shall provide equivalent access to electronic office equipment for individuals with disabilities (employees and others who use the agency's electronic office equipment) to the extent both present and future needs for such access are determined by the agency.**
 - (b) **Agencies shall provide telecommunications access to hearing and speech-impaired individuals to the extent both present and future needs for such access are identified in the requirements analysis. Telecommunications access for hearing and speech impaired individuals shall include education and training on the services and features of the GSA relay service.**
 - (1) **Agencies shall publish access numbers for TDD and TDD-related devices in telephone directories and provide such agency numbers to GSA for inclusion in the Federal TDD Directory.**
 - (2) **Agencies shall display in their buildings or offices the standard logo specified by GSA for indicating the presence of TDD or TDD-related equipment.**
 - (c) **Agencies shall consider the guidance contained in FIRMR Bulletins C-8 and C-10 on the subject of accessibility requirements for individuals with disabilities.**

The essence of this requirement is that agencies consider whether the needs of the disabled should be addressed in the acquisition. This would normally be the case when the government is providing services to the general public or when disabled individuals are employed in the offices that will be served by the FIP resources.

If disabled people are part of the group that will use the FIP resources, program and technical personnel should evaluate the resources they require and decide whether to address accessibility resources as part of the overall acquisition or procure them separately.

(Topic continued on next page)

22.2 Mandatory Factors to Consider When Determining Information Resources Requirements *(continued)*

Accessibility
Requirements for
Individuals with
Disabilities
(continued)

For example, if your agency wants to develop and buy kiosks to provide information to the public, the accessibility of the kiosk should be a fundamental part of the analysis. On the other hand, if several employees require special keyboards, monitors, or computers to access an agency database, it might be more efficient and effective to purchase them separately.

Note that some of these provisions deal with management responsibilities (like posting information), not with the content of the requirements analysis.

Deviation

FIRMR 201-3.402

You should be aware that your agency's Designated Senior Official has broad authority to grant individual deviations to the FIRMR for acquisitions "limited solely to providing electronic office equipment accessibility for employees with disabilities." This authority is limited to those FIRMR provisions that:

- Impede or obstruct the acquisition of technology for employees with disabilities,
- Are not specifically prescribed by statute or executive order, and
- Do not change the level of procurement authority delegated from GSA to the agency.

Further information about accessibility is available in:

- FIRMR Bulletin C-8, *Information accessibility for employees with disabilities*
- FIRMR Bulletin C-10, *Telecommunications accessibility for hearing and speech impaired individuals*
- FIRMR Bulletin C-34, *Video Teleconferencing and use of Federal information processing (FIP) audiovisual and telecommunications resources*
- GSA's documents, *Managing Information Resources for Accessibility*, *Access to Information Technology by Users with Disabilities*, and *Managing End User Computing for Users with Disabilities*

In addition, you can contact GSA's *Clearinghouse on Computer Accommodation*, a demonstration and technical resource center, on (202) 501-4906 or TDD (202) 501-2010.

(continued on next page)

22.2 Mandatory Factors to Consider When Determining Information Resources Requirements *(continued)*

Space and Environmental Requirements

FIRMR 201-20.103-8

Agencies shall consider space and environmental factors when conducting the requirements analysis.

This provision requires agencies to consider where the resources will be located and the environment in which they will operate. Factors may include cabling, power, surge protection, fire protection, secured access, air conditioning and humidity control, dust protection, and similar concerns.

In the case of handheld computers for combat use, environmental factors would be significant. The objective would be optimal operation in difficult and widely varying conditions: extreme low and high temperature, low and high light levels, dry and wet conditions, and so forth.

Workload and Related Factors

FIRMR 201-20.103-9

As a minimum, agencies shall document in the requirements analysis the following factors, as applicable:

- (a) **Projected processing, storage, data entry, communications, and support services workload requirements over the system life and how best to address workload uncertainties.**
- (b) **Expandability requirements.**
- (c) **A performance evaluation of currently installed FIP resources.**
- (d) **Contingency requirements for FIP resources whose loss or failure would prevent the agency from performing its mission, or have an adverse effect on the nation.**
- (e) **Other requirements that must be met or constraints that must be considered.**

These requirements most directly relate to systems procurements where current and projected processing workloads must be carefully measured to support the workload over the systems life. For complex acquisitions, projected workload and expandability needs can result in contracts that allow upgrade and improvement over the systems life.

(Topic continued on next page)

22.2 Mandatory Factors to Consider When Determining Information Resources Requirements *(continued)*

Workload and Related Factors (continued)

Nonetheless, it is important to all acquisitions that planners consider if needs for additional quantities, enhanced features or functions, or expansions may arise during the contract life. If such needs are projected, your solicitation can carry options and obtain pricing for them—avoiding the expense and limited competitiveness of mid-contract “fixes.”

In the case of handheld computers, a workload assessment might identify potential future needs for increased quantities, enhanced transmission speeds, or expanded memory capacity.

You should be aware that contingency planning, which could result in your specifying an alternative or back-up computing site, is often done as part of security planning, not workload management.

GSA’s OTA has published a handbook on *Capacity Management* that may be of use to the program and technical staff on your acquisition team.

Records Management Requirements

FIRMR 201-20.103-10

Agencies shall include records management factors in the requirements analysis.

Records management involves the creation, maintenance, use, and disposition of records, including electronic records. These provisions are likely to apply to acquisitions for facilities management, systems development, or support services where contractors create, maintain, use or dispose of Federal records.

These provisions also specifically apply to electronic mail systems as a result of a court case which determined that e-mail transmissions may be Federal records which must be maintained and preserved. The National Archives and Records Administration (NARA) regulations on this subject were not final at the time this text was written. You should be aware, however, that special features or functions may be required in your solicitations for e-mail systems to comply with records management regulations.

(Topic continued on next page)

22.2 Mandatory Factors to Consider When Determining Information Resources Requirements *(continued)*

Records Management Requirements *(continued)*

You should also be aware that FIRM 201-6.002, *Predominant Considerations*, encourages agencies to “ensure that individuals responsible for implementing the agency’s records management programs participate . . . in the determination of the agency’s information needs and FIP resources requirements.”

Further information on records management is in:

- FIRM Part 201-9, *Creation, Maintenance, and Use of Records*
- FIRM Bulletin B-1, *Electronic records management*
- GSA’s guides, *Records Management and the Development of Automated Information Systems* and *Applying Technology to Record Systems—A Media Guideline*
- NARA’s proposed regulation, *Electronic Mail Systems* (published in the *Federal Register* on March 24, 1994)

Energy Efficiency Requirements for Microcomputers

FIRM 201-20.103-11

Energy efficiency requirements for microcomputers.

- (a) **Agencies shall include requirements for energy efficiency in the requirements analysis. At a minimum, agencies shall require that microcomputers, including personal computers, monitors, and printers, acquired by the agency be equipped with the energy efficient low-power standby feature as defined by the Environmental Protection Agency Energy Star computer program, unless the equipment meets the Energy Star requirements at all times. To the extent permitted by law, agencies shall include this specification in all existing contracts, if any additional costs would be offset by the potential energy savings.**
- (b) **Agencies shall consider the guidance contained in FIRM Bulletin C-35 in developing their requirements and for the specific procedure for reporting exempted acquisitions.**

(Topic continued on next page)

22.2 Mandatory Factors to Consider When Determining Information Resources Requirements *(continued)*

Energy Efficiency
Requirements for
Microcomputers
(continued)

- (c) **Agencies shall report annually, by October 18 on acquisitions exempted from this requirement. Reports shall be sent to: GSA, Acquisition Reviews Division (KMA) , 18th and F Streets, NW, Washington, DC 20405.**
- (d) **Agencies shall ensure that Federal users are made aware of the significant economic and environmental benefits of the low energy efficient power standby feature and its aggressive use by including this information in routine computer training courses.**

This newest addition to the requirements of FIRMR 201-20.1 addresses the mandate to include certain energy efficiency requirements in solicitations for personal computers, monitors, and printers. The low-power standby feature powers down idle computers into a “wait state” that uses less electricity. Although the power savings by computer are small, when multiplied by the millions of computers in the government, savings are expected to be very significant.

Although some of these provisions do not deal with developing a requirements analysis, this requirement affects the specifications in your solicitations for personal computers, monitors, and printers. You must include specifications that meet “EPA Energy Star” requirements for energy efficiency or obtain an exemption to the requirement.

Further information is provided in:

- Executive Order 12845, *Requiring Agencies to Purchase Energy Efficient Computer Equipment*, dated April 21, 1993
 - Office of Federal Procurement Policy (OFPP) Policy Letter 92-4, *Procurement of Environmentally-Sound and Energy-Efficient Products and Services*
 - FAR Subpart 23.2, *Energy Conservation*
 - FIRMR Bulletin C-35, *Energy-efficient microcomputers and associated computer equipment*
 - GSA’s guide, *Energy-Efficient Microcomputers: Guidelines on Acquisition, Management, and Use*, which suggests “general specification language.”
-

22.3 Nonmandatory Factors to Consider When Determining Information Resources Requirements

Introduction

As you learned in the previous sections, GSA's requirements for content of a requirements analysis have as much to do with conforming with Federal law and policy as with describing reasonable contents of a requirements analysis. *It is important for you to understand that the content of a requirements analysis is affected as much by the FIP resources to be acquired as by the FIRMR.*

As you have learned, you would not expect to see energy-efficient requirements for microcomputers addressed in a procurement of support services. You would not see justifications for compatibility or specific make and model in a competitive procurement. And you would not expect to see records management requirements in a procurement of printers.

This section addresses some of the other areas that should reasonably be addressed in requirements analyses.

Remember: just because these factors are not mandated by FIRMR 201-20.1 does not necessarily mean that they are unimportant. In fact, in a given FIP resource acquisition, a nonmandatory factor may be critical and require detailed discussion and justification.

Factors or considerations which are not mandated by the FIRMR but may be included in a FIP resource requirements analysis include:

- Description of the current system or resources
 - Goals and objectives
 - Constraints and assumptions
 - Training
 - Implementation
 - Managing competitiveness
-

Description of the current system or resources

Normally, agencies should describe in some detail the current system or resources that will be replaced by the acquisition. This helps to establish the problems that must be corrected by the replacement resources, which in turn help establish program and performance goals. The description of current resources is sometimes included as part of the FIRMR 201-20.103-3 description of requirements section.

(continued on next page)

22.3 Nonmandatory Factors to Consider When Determining Information Resources Requirements *(continued)*

Goals and Objectives

Often, agencies will devote a section of the requirements analysis to identifying goals and objectives for the acquisition and the replacement resources. (Agencies may also organize this information in response to the mandate in FIRMR 201-20.103-3 to describe requirements in terms of performance.)

No matter where it appears, it is essential for agencies to define goals and objectives as performance measures. Although these goals and objectives should focus on both program and resource measures, the more important are program goals. Consider the difference between a requirement to “transmit information at 14,400 bits per second” and a requirement to “decrease from one hour to five minutes the time delay from satellite location of enemy troops to receipt of that information on the battlefield by combat commanders.”

Constraints and Assumptions

Constraints are factors that affect and limit in some way the solutions possible for the acquisition. Constraints may relate to laws or regulations or technological, socio-political, financial, or operational conditions. For example, if Congress mandates a source—such as acquiring supercomputers from American firms—then agencies’ choices are constrained: they must conform to the limitation. Another example of a constraint is the need for compatibility.

Agencies must ensure that the constraints they identify do not artificially restrict or direct a solution. Constraints should support the *competitive* selection of the best system for the problem to be solved. If not, the constraint should be justified.

Assumptions are factors predicted to apply to the program or project that affect the acquisition. For example, the system life and workload projections are common assumptions. Other assumptions might relate to cost, resource, program, or technical factors.

Training

Many types of acquisitions require training the staff before the resources can be effectively used. In fact, for complex systems acquisitions, staff training may be required early in the process to support field tests or performance validations during the acquisition. Such acquisitions should address training as an integral part of the requirements analysis.

(continued on next page)

22.3 Nonmandatory Factors to Consider When Determining Information Resources Requirements *(continued)*

Implementation	<p>Most acquisitions should have an implementation plan developed long before the contract is awarded. One of the most effective ways to ensure this is to address implementation as part of the requirements analysis. This enables the agency to plan for such activities as testing and acceptance, parallel operations, phased installation schedules, and similar events.</p>
Managing competitiveness	<p>During the requirements development phase, agencies should consider means of managing and ensuring competitiveness throughout the systems life. Factors for consideration might include maintaining competitively-priced supply and maintenance sources, measuring contract prices against the movement of commercial prices, price leveraging on multiple contract sources, and preparation for follow-on or replacement contracts.</p>
Other Considerations	<p>GSA's popular acquisition guides include special considerations for the requirements analysis <i>by type of resource</i>. For example, if you are buying systems integration services, GSA suggests that you consider (among other factors) the need for integration with other systems. If you are buying maintenance services, you should consider the length of time your agency can tolerate hardware outages (downtime). And if you are buying FIP support services, you should consider minimum personnel and corporate qualifications.</p> <p>These guides, which follow a standardized outline, normally address requirements analysis in Chapter 5. So if you are participating in or reviewing a requirements analysis, you should refer to these guides. Available on GSA's CD-ROM or through its IRM Reference Center, they now include:</p> <ul style="list-style-type: none"> • <i>A Guide for Acquiring Maintenance Services</i> • <i>A Guide for Acquiring Commercial Software</i> • <i>A Guide for Acquiring Systems Integration Services</i> • <i>A Guide for Acquiring Federal Information Processing Support Services</i> • <i>A Guide for Requirements Analysis and Analysis of Alternatives</i> • <i>Overview Guide - Acquisition of Information Resources</i>

(continued on next page)

22.3 Nonmandatory Factors to Consider When Determining Information Resources Requirements *(continued)*

Determining Applicable Standards

Although FIRMR 201-20.1 does not specifically indicate, the requirements analysis should also identify the standards that apply to the proposed FIP resource acquisition. However, FIRMR 201-20.303(c) provides that technical and requirements personnel are responsible for reviewing each standard to determine its applicability to each requirement

This standards determination should be part of the requirements analysis.

Chapter 33, *Review Standards for FIP Resources Acquisitions*, contains a detailed discussion of the requirement to review the proposed standards for an acquisition.

SUMMARY

In this chapter, you learned how to determine if the mandatory and nonmandatory requirements are included in the requirements analysis. In the next chapter, you will learn about the difference between the FIRMR and the FAR requirements for a justification and approval when other than full and open competition is used

CHAPTER 23

DETERMINING THE SCOPE OF COMPETITION FOR FIP RESOURCES

Chapter Vignette

“Well, one thing is sure, “ said Mark, “at least we do not have to worry about having adequate competition. Every time I look in a newspaper or magazine, there are ads for some new computer maker that I never heard of before.”

“Careful there,” said Marcia. “It is true that there are many new manufacturers of desk top computers. That is one reason prices for desk top models have come down so far in the past several years. But, you must remember that a FIP acquisition may involve much more than just hardware. The most efficient and lowest cost offeror for computers may not necessarily be the best overall source for software, integration, operation, and services. Besides, there may be a serious concern about compatibility with the existing FIP resources, so it is necessary to evaluate competition against the total FIP requirement, not just the hardware.”

Course Learning Objectives

At the end of this chapter, you will be able to:

Overall:

Demonstrate the difference between the FIRMR and FAR requirements for a justification and approval when other than “full and open competition” is used.

Individual:

- 23.1 Apply factors in determining and justifying a requirement which is other than full and open competition.
- 23.2 State and interpret acceptable situations for a compatibility-limited requirement.
- 23.3 State and interpret acceptable situations for a specific make and model.

Chapter Overview

Scope

This chapter discusses the actions that you should take to determine the scope of competition for a FIP resource acquisition. The scope of competition will have a major impact on your acquisition strategy, on the source selection, and the overall FIP resource acquisition.

For example, if the scope of competition is high, with many offerors expected to respond to the solicitation, you may have to plan for a drawn out acquisition. On the other hand, if competition is low, with only a very few qualified offerors expected, then the overall evaluation may proceed more quickly.

However, less competition usually narrows the choices available to the Government, so it is usually in the Government's best interests to ensure maximum competition. One way to do this is to make sure that the requirements are not unnecessarily restrictive. For example, if the requirement is stated for either a "compatibility-limited" requirement, or a "specific make and model" requirement, this can greatly restrict the scope of competition.

Therefore, one of your responsibilities will be to ensure that compatibility-limited requirements and specific make and model requirements are fully justified, documented and approved.

References

In order to thoroughly understand the principles and procedures described in this chapter, you should refer to the following:

- FAR 6.2, 6.303 and 6.304; and 5.2;
- FIRM 201-20.103-3, 201-39.6, 201-39.802 & .803, 201-4.001
- DFAR 206.2 and 206.3

Topics Covered in this Chapter

The major topics covered in this chapter are:

SECTION	TITLE	PAGE
23.1	Factors in Determining and Justifying a Requirement for Other Than Full and Open Competition	23-4
23.2	Acceptable Situations for a Compatibility-Limited Requirement	23-10
23.3	Acceptable Situations for a Specific Make and Model Requirement	23-11

23.1 Factors in Determining and Justifying a Requirement for Other Than Full and Open Competition

Requirement for
Full and Open
Competition

As you should already know, it is usually in the Government's best interests to maximize competition in any acquisition, as well as being required by statute. Full and open competition usually leads to a greater selection of alternatives and makes it easier to select a more advantageous alternative during source selection.

Full and Open
Competition After
Exclusion of
Sources

FAR Subpart 6.2

You may recall that FAR Subpart 6.2 allows for full and open competition AFTER exclusion of sources. It permits an agency to exclude a particular source from a contract action in order to establish or maintain an alternative source for the supplies or services being acquired if that will increase competition, lower costs, or be in the interest of national defense.

In addition, FAR 6.203 provides for set asides for small businesses and labor surplus areas, and FAR 6.204 allows contracting officers to limit competition to eligible 8(a) contractors.

You should be aware that you may also apply any of these limits to full and open competition to the acquisition of FIP resources, as appropriate.

(continued on next page)

23.1 Factors in Determining and Justifying a Requirement for Other Than Full and Open Competition *(continued)*

Other Than Full
and Open
Competition

You may also recall that FAR Subpart 6.3 establishes several exceptions for other than full and open competition. These exceptions are shown in the following table.

EXCEPTIONS TO FULL AND OPEN COMPETITION (FAR SUBPART 6.3)			
	Synopsis Required?	J&A / D&F Required?	
1.	Yes	J&A	There is only one responsible source and no other supplies or services will satisfy agency requirements (FAR 6.302-1);
2.	No	J&A	Unusual and compelling urgency (FAR 6.302-2);
3.	No	J&A	Industrial mobilization; or engineering, developmental or research capability; (FAR 6.302-3);
4.	No	NoT if HCA prepares/Competition Advocate approves	International agreement (FAR 6.302-4);
5.	No	Requirement not authorized, need J&A	When authorized or required by statute (FAR 6.302-5);
6.	Maybe	J&A	National security (FAR 6.302-6); and
7.	No	D&F to Congress	Public interest (FAR 6.302-7).

DFAR Subpart
206.3

DFAR 206.3 largely echoes the guidance in the FAR concerning exceptions to full and open competition, but provides some additional detailed procedures for DoD-related acquisitions.

Note: The FIRMR states that 40 U.S.C. 459(g) will be used instead of 10 U.S.C. for specific make and model justifications for less than full and open requirements.

Exceptions to Full
and Open
Competition

However, there will be times when full and open competition in a FIP resource acquisition is just not possible. For example, an agency may have a valid concern that a new computer must be able to communicate and operate with existing FIP equipment already installed. Or, a new computer may be required to operate with the existing software programs on hand. When this happens, the agency may conclude that it must acquire a FIP resource under conditions of less than full and open competition. This might include either a **“compatibility-limited requirement”** or a **“specific make and model”** requirement.”

23.1 Factors in Determining and Justifying a Requirement for Other Than Full and Open Competition *(continued)*

Exceptions to Full and Open Competition

An agency should conclude that it requires a compatibility-limited specification or a specific make and model specification *only after performing the requirements analysis and thorough market research*. (For a detailed discussion of the requirements analysis, see Chapter 22, “Content of a Requirements Analysis.” For information on market research, see Chapter 16, “Market Research for Acquisition of FIP Resources.”)

You can see that in some cases, it will be fairly easy for an agency to justify other than full and open competition. Examples are when authorized by a statute, or when required for national security.

However, it may be more difficult to provide acceptable justification under the first and second exceptions shown in the preceding table (only one responsible source or unusual or compelling urgency). In such cases, you must check the justification carefully to be sure that there really are no other sources which can provide the supplies or services or that there really is compelling urgency.

In any case, it may be still be possible to proceed with an acquisition that allows for less than full and open competition. However, when this occurs, you must ensure that the process for full justification and approval is followed. And, you must be aware of the FIRMR and FAR requirements for justification and approval.

You should also be aware that there are differences in the FIRMR and FAR requirements for justification and approval.

FAR Requirements for Justification

FAR Part 6

FAR Part 6 explains competition requirements. FAR 6.303-1 and 6.302 explain the restrictions on award of a contract with less than full and open competition. Note that it is possible to proceed with a contract under conditions of less than full and open competition, provided that the contracting officer:

1. Justifies the use of such actions in writing;
 2. Certifies the accuracy and completeness of the justification, and;
 3. Obtains required approval. The approval will depend on the size of the proposed contract.
-

(continued on next page)

23.1 Factors in Determining and Justifying a Requirement for Other Than Full and Open Competition *(continued)*

Contents of the Justification

FAR 6.303-2

Be careful. the justification is not an automatic or “rubber stamp” process. FAR 6.303-2 is specific on the content of a justification under conditions of less than full and open competition. Your justification **MUST** contain the following:

- identification of the agency and the contracting activity;
- nature and/or description of the action being approved;
- supplies or services required (including estimated value);
- identification of the statutory authority permitting other than full and open competition;
- a demonstration that the proposed contractor’s unique qualifications or the nature of the acquisition requires use of the authority cited;
- a description of efforts made to ensure that offers are solicited from as many potential sources as is practicable, including whether a CBD notice was or will be publicized as required by FAR Subpart 5.2 and, if not, which exception under 5.202 applies;
- a determination by the contracting officer that the anticipated cost to the Government will be fair and reasonable (note that this may require you to do a cost analysis before you can make this statement)
- a description of the market survey conducted and the results or a statement of the reasons a market survey was not conducted; and
- any other facts supporting the use of other than full and open competition (note that this may include an explanation of why complete technical data packages were not developed).

FAR Subpart 5.2

(continued on next page)

23.1 Factors in Determining and Justifying a Requirement for Other Than Full and Open Competition *(continued)*

Justification for “Follow-on” Requirements

One of the most frequent reasons given by agencies to justify sole source or other restricted competition acquisitions is the need for a follow-on requirement. In a follow-on requirement, the agency or program office may often justify a sole source acquisition on the grounds that only the incumbent contractor is capable of providing the supplies or services required in an efficient manner. This may happen often in requests for FIP support services.

For example, if an incumbent contractor has been providing computer maintenance services for three years, the agency may attempt to justify a follow-on contract on the grounds that any other contractor would simply take too much time to attain the same levels of efficiency as the incumbent contractor. Or, the agency may argue that a prolonged contracting process may risk unacceptable delays, interruptions, or increased costs in obtaining continuous FIP maintenance services.

There is no doubt that incumbent contractors are usually better positioned to continue a FIP support service without interruption than any competitor. However, as the contract specialist or contracting officer, you should not take such justifications for follow-on awards on their face value. When an agency justifies a follow-on contract on the basis that there is only one acceptable source for the supply or service (the incumbent), make sure that the justification is complete and includes convincing cost data.

If not, explain to the agency that just because the incumbent has provided satisfactory supplies or services in the past is, by itself, not sufficient justification for a follow-on, unless there is really no other acceptable source.

FAR 6.304

FAR 6.304 provides dollar ceilings for the justifications. For example, the contracting officer’s certification is sufficient for contracts up to \$100,000.

For contracts totaling between \$100,000 and \$1,000,000, the contracting officer must obtain the approval of the “competition advocate” of the agency (FAR 6.5). Above \$1,000,000, you should check with your agency’s policies and regulations.

(continued on next page)

23.1 Factors in Determining and Justifying a Requirement for Other Than Full and Open Competition *(continued)*

FIRMR
Requirements for
Justification

FAR 6.303 & 6.304.

FIRMR 201-39.6 explains competition requirements specifically for FIP resources. It emphasizes that an acquisition containing a specific make and model specification does not provide for full and open competition and must be justified and approved in accordance with FAR 6.303 and 6.304.

Orders Against
GSA
Nonmandatory
Schedules

FIRMR 201-39.803

However, when using the GSA nonmandatory FIP schedule contracts, you must follow the provisions of FIRMR 201-39.803.

23.2 Acceptable Situations for a Compatibility-Limited Requirement

Acceptable Situations for a Compatibility- Limited Requirement

FIRMR 201-4.001

In some cases, a requiring agency may submit a compatibility-limited requirement. A compatibility-limited requirement is defined as “*a statement of FIP resources requirements expressed in terms that require the items to be compatible with existing FIP resources*” (FIRMR 201-4.001).

A compatibility-limited requirement is not quite as restrictive as a specific make and model requirement, but it still limits the scope of competition. A compatibility-limited requirement may be submitted when an agency believes that new FIP resources must be compatible with those FIP resources already on hand.

For example, suppose that an agency already has a certain main frame computer in use, connected to 200 terminals or work stations throughout the agency. If the agency procures new terminals, they must interface and be compatible with the existing main frame computer. In such a case, the agency might specify a compatibility-limited requirement for the new terminals.

However, the agency would have to justify the compatibility-limited requirement, and approval is not automatic. The agency would have to explain why the terminals must be compatible with the existing computer.

Unacceptable Situations for a Compatibility- Limited Requirement

In some cases, you will find that the situation clearly does not support a compatibility-limited requirement. If the requirement has not been carefully stated in functional terms, it is very likely that it will not be acceptable.

For example, consider the following language justifying a hypothetical compatibility-limited requirement: “*....All the computers in the agency’s present local area network must be capable of exchanging information (text and document images), so the computers to be acquired in this acquisition must be compatible with the XYZ Model 12....*”

The problem here is that some computers that are not compatible with one another (different operating systems) can still exchange information over a LAN. A thorough requirements analysis of available software should have brought this out.

In this hypothetical case, the justification is not sufficient for a compatibility-limited requirement and you should not proceed with the solicitation unless stronger justification is provided.

23.3 Acceptable Situations for a Specific Make and Model Requirement

Acceptable
Situations for a
Specific Make and
Model
Requirement

FIRMR 201-4.001

In some cases, a requiring agency may submit a specific make and model requirement. A specific make and model specification is defined as “*a description of the Government’s requirements for FIP resources that is so restrictive that only a particular manufacturer’s products will satisfy the Government’s needs, regardless of the number of suppliers that may be able to furnish that manufacturer’s products*” (FIRMR 201-4.001).

Note that there may be a number of suppliers, but only one manufacturer’s products are acceptable. For example, if the agency specifies a certain IBM model computer, it may be available through several suppliers, but only that make and model will be acceptable.

You can see that a specification for a specific make and model is even more restrictive and limits competition even more than a compatibility-limited requirement, so you must be sure that a specification for a specific make and model is appropriate for the situation, and it must be justified.

An acceptable requirement for a specific make and model might occur when only that make and model might meet certain functional requirements. Some requirements for FIP are so specialized that only one manufacturer can possibly meet that requirement.

For example, only one manufacturer may hold a certain patent to produce a certain type of FIP resource. If no one else manufactures that FIP resource, then a specific make and model requirement is easier to justify.

Brand Name or
Equal

In some cases, it may not be so clear that only one manufacturer can produce a unique FIP resource. In such cases, it may NOT be advisable to specify a specific make and model. Instead, it is more acceptable to specify a requirement for “*brand name or equal.*” However, the requirement must be specified in functional terms and must be justified and needs to describe the salient characteristics. A brand name or equal requirement is considered competitive and does not require a J&A.

For example, if you are reasonably sure that only the equipment made by one manufacturer can meet a certain functional requirement, such as computer disk drive speed or storage capacity, you can specify the requirement in language similar to the following:

“The disk drive must meet or exceed the performance characteristics of the ABC Model 577 disk drive, in order to meet operational requirements.”

(continued on next page)

23.3 Acceptable Situations for a Specific Make and Model Requirement

(continued)

Unacceptable
Specification for a
Specific Make and
Model

FIRMR 201-20.103-3
FIRMR 201-20.103-4
40 USC 759(g)

An agency may specify a specific make and model in a situation where it is not appropriate to do so. For example, assume that an agency requires 200 terminals connected to a specific large IBM main frame computer and it concludes that only a certain IBM model terminal is acceptable. This may be a wrong conclusion. It may be that several other manufacturers can also provide terminals that are interoperable with the IBM main frame.

It could be that the agency's requirements analysis was faulty and did not describe the requirements in terms of *functions to be performed*, in accordance with FIRMR 201-20.103-3 and 201-20.103-4 and 40 USC 759(g). 40 USC 759(g) details the specifics for the authority. Or, it could be that initial market research was incomplete and that a specific make and model is not really essential to performing the required function.

You should be aware that sometimes an agency may specify a specific make and model only because the existing equipment already on hand was made by a certain manufacturer and the agency wrongly assumes that only one manufacturer's equipment is interoperable with the existing equipment.

For example, just because all the existing FIP equipment on hand in an agency was made by the XYZ Corporation is NOT sufficient justification to specify new FIP equipment only from XYZ.

Specifying in
Functional Terms

Again, the key is specifying requirements in FUNCTIONAL terms, rather than automatically specifying a specific make and model. Remember that a functional specification is one that is expressed in terms of how the FIP resource (hardware or software) must perform. So, if you are reviewing a requirement that is NOT expressed in functional terms, you should question it unless there is sufficient justification.

For example, an acceptable requirement might state, "The computer must operate at 66 megahertz." A very similar unacceptable requirement might read, "The computer must be a XYZ Model 1100, operating at 66 megahertz."

(continued on next page)

23.3 Acceptable Situations for a Specific Make and Model Requirement

(continued)

Checklist for Determining Scope of Competition Requirements

The following checklist summarizes the actions you should take as a contract specialist to determine the scope of competition for a FIP resource requirement.

	Yes	No
1. Did the requiring agency/program office perform and document a thorough requirements analysis and market research?	_____	_____
2. Is this acquisition appropriate for full and open competition after exclusion of sources (FAR 6.2)?	_____	_____
3. Is this acquisition appropriate for exclusion under exceptions to full and open competition (FAR 6.3)?	_____	_____
4. If a justification is for less than full and open competition, do the contents meet the requirements of FAR 6.303-2?	_____	_____
5. If this justification is for a “follow-on” requirement, does the cost data support the award to the incumbent contractor?	_____	_____
6. If the justification is for an amount above \$100,000 have you obtained the appropriate approval of the “competition advocate?”	_____	_____
7. If this requirement is “compatibility-limited,” does the justification support the requirement?	_____	_____
8. If this requirement is for a “specific make and model,” or “brand name or equal,” does the justification (including technical specifications) support the requirement?	_____	_____
9. For all requirements where less than full and open competition is indicated, are the requirements specified in functional terms?	_____	_____

If the answer to any of the above questions is “No,” you may not be able to proceed with an acquisition under less than full and open competition.

Remember, in most cases, the program office or the requiring agency will (hopefully) have conducted a thorough requirements analysis and market research to identify likely sources, technical qualifications of offerors and information on the scope of the competition. However, it is still your responsibility to review any conclusions about the scope of competition and to determine that any justification for less than full and open competition is adequate.

SUMMARY

In this chapter, you learned about the difference between the FIRMR and the FAR requirements for a justification and approval when other than full and open competition is used. In the next chapter, you will learn about the need to determine whether conversion studies are necessary.

CHAPTER 24

ANALYSIS OF A REQUIREMENTS ANALYSIS

Chapter Vignette

“I keep coming back to the same conclusion,” said Mark, “and that is, I hope the technical experts really know what they are doing when they write the requirements analysis.”

“I hope so too,” Marcia added, “but remember that you must be able to critique the requirements analysis, no matter who wrote it. That means that you must know what is required and know how to analyze against those requirements. Otherwise, your critique will not be effective. Remember, a requirements analysis may be technically accurate and still be unacceptable as an acquisition planning document.”

Course Learning Objectives

At the end of this chapter, you will be able to:

Overall:

Analyze a proposed requirements analysis to determine if the mandatory requirements are included.

Individual:

- 24.1 Explain the key factors required for a successful requirements analysis.
- 24.2 Explain the analytical process required to critique a requirements analysis.
- 24.3 Explain how to determine agency unique-requirements.
- 24.4 Explain how to determine if a RA should be submitted.
- 24.5 Describe the review of a RA.
- 24.6 Explain the process of revision or expansion by the requiring activity.
- 24.7 Demonstrate how to analyze an example of a requirements analysis.

Chapter Overview

Scope

This chapter explains the actions you should take to analyze, or critique, a requirements analysis for a FIP resource acquisition.

Several related chapters explain some of the information that you may need to know about the requirements analysis. For example:

- Chapter 5 discusses the system life cycle
- Chapter 22 presents the mandatory and nonmandatory requirements from the FIRMR
- Chapter 23 explains the determination of the scope of competition
- Chapter 24 discusses the requirements for a conversion study
- Chapter 33 discusses standards for FIP resources acquisitions

This chapter will explain the proper order of requirements analysis coverage, based on the FIRMR. It will demonstrate how to analyze a requirements analysis by suggesting questions you might ask during your review. With this basis, you will understand how to apply the same analytical techniques against agency-unique requirements.

Finally, it will also show you how to recognize a requirements analysis and provide an example of a requirements analysis.

Topics in This Chapter

This chapter includes the following topics:

SECTION	TITLE	PAGE
24.1	Key Factors for a Successful Requirements Analysis	24-5
24.2	Analytical Process: Critiquing the Requirements Analysis	24-9
24.3	Step 1: Determine Agency-Unique Requirements	24-10
24.4	Step 2: Determine if a Requirements Analysis Should be Submitted	24-11
24.5	Step 3: Review the Requirements Analysis	24-13
24.6	Step 4: Advise the Requesting Activity of the Need for Revision or Expansion	24-24
24.7	An Example of a Requirements Analysis for Review	24-25

Chapter Overview *(continued)*

References

In order to understand the topics in this chapter, you may need to refer to:

- FIRMR 201-7.002, 201-20.001, 201-20.1, 201-20.103-1, 201-20.201, 201-20.202
 - FIRMR Bulletins C-5 and C-11
 - GSA’s “A Guide for Requirements Analysis and Analysis of Alternatives”
-

24.1 Key Factors for a Successful Requirements Analysis

Key Factors for Successful Requirements Analysis

Even *before you get started* on the step-by-step procedure for analyzing a requirements analysis, you should understand five key factors that are necessary for success:

- Defining requirements functionally
- Distinguishing between mandatory and desirable features and capabilities
- Establishing assumptions and constraints
- Devoting sufficient resources to the project
- Reassessing requirements periodically

These factors are addressed in the following tables.

Key Factors for Successful Requirements Analysis	
1.	<p><i>Define the requirements functionally.</i> Whenever possible, describe the requirements in functional terms (what the hardware, software, or service will DO — its “capabilities” or “features.”) <i>Avoid specifying a specific make and model or other restriction that will limit competition.</i></p> <p>Instead, describe what the hardware or software has to do.</p> <p>For example, consider the two statements of requirements below:</p> <ol style="list-style-type: none">1. Non-functional: “This agency has a requirement for a Bergen Model 1200 high speed scanner in order to scan and transmit a large volume of full color images each day from the operating field offices to the main archive for storage.”2. Functional: “This agency has a requirement for a high speed color scanner capable of scanning and transmitting an average of 1,000 full color images per day from the operating field offices to the main archive for storage.” <p>The statements are similar, but the first is too restrictive. The second describes the requirement in functional terms and will ensure more competition.</p> <p><i>(Table continued on next page)</i></p>

24.1 Key Factors for a Successful Requirements Analysis *(continued)*

Key Factors for Successful Requirements Analysis (continued)

Key Factors for Successful Requirements Analysis <i>(continued)</i>	
2.	<p><i>Distinguish between mandatory and desirable features and capabilities.</i> A mandatory feature or capability is a “must have,” while a desirable feature or capability is a “nice to have.” A desirable feature may be very useful and effective, but is not absolutely essential to the operational requirement or mission of the agency.</p> <p>For example, suppose that you had a requirement for a large electronic printer that must be used in extensive production runs of 10,000 pages or more each day. The requiring agency states the mandatory requirement that the printer must be capable of producing 10,000 pages per day. However, the agency also requires that the printer must automatically adjust to different sizes of paper without human intervention.</p> <p>The second requirement might really be a “desirable” (NOT mandatory) requirement that greatly increases price and restricts competition, unless the agency can justify it. You would not <i>know</i> if the second requirement were desirable unless you asked questions.</p> <p>If you are not certain that a stated requirement is really mandatory, be sure to ask.</p>
3.	<p><i>Identify and agree on assumptions and constraints.</i> Remember, EVERY requirement is based on some assumptions and some constraints. An assumption is an informed guess about the future. If it is reasonable, it may be very useful. If it is NOT reasonable, it may be useless, or even harmful, and greatly increase the cost of the acquisition.</p> <p>A <i>constraint</i> is an informed guess about the limits or restrictions that apply to the acquisition. For example, one constraint is always cost. Common constraints include:</p> <ul style="list-style-type: none"> • Cost — how much money is expected to be available to support this acquisition; • Time — the latest date when the new hardware, software or service must be available; • Technical limits — the level of expertise available to support and implement the acquisition, integration requirements, space available, and other technical limits; and • Organizational and political constraints. <p style="text-align: right;"><i>(Key Factor 3 continued on next page)</i></p>

24.1 Key Factors for a Successful Requirements Analysis *(continued)*

Key Factors for Successful Requirements Analysis (continued)

Key Factors for Successful Requirements Analysis <i>(continued)</i>	
3. (cont.)	<p>The requirements analysis is done very early in the acquisition life cycle, so assumptions and constraints that were valid and reasonable when new, may look very foolish later when conditions change.</p> <p>For example, imagine a situation where an agency is acquiring a complex supercomputer, but does not include a requirement for training. This might be done because the agency believes it has sufficient trained personnel on hand and can absorb the new hardware without outside assistance.</p> <p>This assumption might be correct, but if it is not, there can be a great deal of difficulty and added cost later on. Therefore, the assumption that no training is needed should be explained.</p> <p>It is crucial that the assumptions and constraints be carefully described and documented so others can fully understand them later.</p> <p><i>Of course, it is possible that an assumption or constraint may not be realistic or reasonable, so you should review them carefully, especially for their effect on competition. If you have doubts, you might even obtain a formal, written memorandum of understanding on the explicit assumptions and constraints.</i></p>
4.	<p><i>Devote the appropriate level of effort to the requirements analysis. If the FIP resource acquisition will be a large purchase, your agency should devote a considerable amount of personnel, time and energy to the development of the requirements analysis. If this has not been done, you may find the acquisition to be at risk of failure.</i></p> <p><i>(Table continued on next page)</i></p>

24.1 Key Factors for a Successful Requirements Analysis *(continued)*

Key Factors for Successful Requirements Analysis (continued)

Key Factors for Successful Requirements Analysis <i>(continued)</i>	
5.	<p><i>Reassess requirements periodically.</i> Finally, the last factor is to make sure your agency reassesses requirements periodically. Requirements can change very quickly as a result of new missions, new responsibilities, reorganizations, new technologies or new capabilities. Remember, a complex FIP resource acquisition can take up to two years or more from start to finish. Much can happen during that time that could change the original requirement.</p> <p>For example, when an original requirement is first generated, it is probably written to acquire the latest technology available. But FIP technology advances very quickly, and two years is a very long time. It is very possible that a requirement written two years ago for almost any FIP resource acquisition will be outdated.</p> <p>For this reason, you should make sure that the requirements are periodically reviewed by technical personnel to be certain they are still current and valid. In fact, they should be reviewed at least once every six months. If an important event, such a reorganization occurs, or if there is a change in the agency mission, it is a good idea to review the requirement to see if it is still valid.</p>

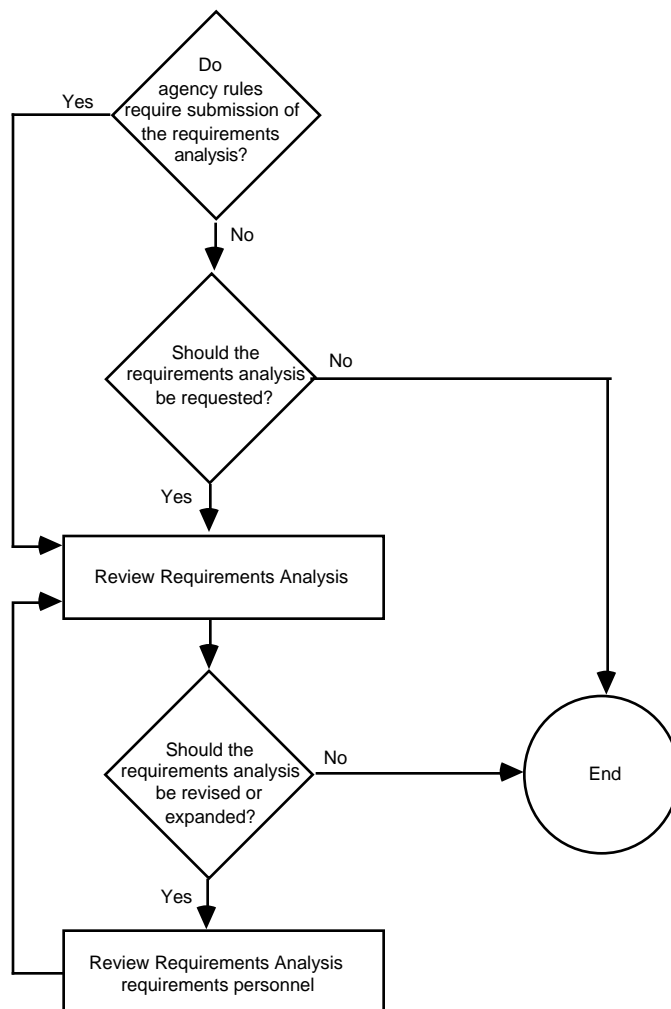
24.2 Analytical Process: Critiquing the Requirements Analysis

Analytical Process

The process of critiquing a requirements analysis involves four primary steps:

- Determine if there are any agency-unique requirements for the requirements analysis.
- Determine if the requirements analysis has been or should be submitted.
- Review the requirements analysis.
- Advise the requiring activity if the requirements analysis should be revised or expanded.

The flow chart below illustrates the decision process.



24.3 Step 1: Determine Agency-Unique Requirements

Agency Rules

As you learned in Chapter 15, Federal agencies often have their own rules about what must be included in requirements analyses. *Such agency-unique rules are in addition to those established by the FIRMR.*

For example, one agency specifically requires its components to address the IRM goals and strategies of its five year information technology plan. It also specifically requires its components to specify the Application Portability Profile standard or cite the waiver authority.

It is important for you to know if your agency has set additional rules for the content of the requirements analysis. Keep in mind that this chapter addresses the FIRMR requirements as well as other suggested considerations: you must add your agency's rules to the checklists and notes in this chapter.

24.4 Step 2: Determine if a Requirements Analysis Should be Submitted

Submission Requirements

In addition to rules about the content of a requirements analysis, your agency may specify procedures for submission, review, approval, and dissemination of requirements analyses.

For example, some agencies require, for acquisitions above a certain threshold, that a copy of the requirements analysis be provided to the IRM and contracting offices. Others require that components certify that the requirements analysis has been completed and provide the date of approval of the requirements analysis. Some agencies have no internal requirements at all.

You need to be familiar with what your agency requires, not only in terms of content, but also in terms of submission, approval, and dissemination of the requirements analysis.

Special Requests for Submission

Even if your agency does not require by rule or procedure the submission of a requirements analysis, the contracting officer normally has sufficient authority to request a copy. When would this be wise?

Contracting officers are responsible under the law for acquiring only those resources that will satisfy agency needs in a competitive and cost-effective manner. The contracting officer may need to review the requirements analysis to be sure he or she is fulfilling these responsibilities. Since the acquisition strategy depends a great deal on the program office's determination of need and justifications, there are times when the requirements analysis should be reviewed and held in the contracting activity's files.

Contracting offices should consider requesting a copy of the requirements analysis for review when a program or an acquisition:

- Does not make sense,
- Is unusually critical to the agency's mission,
- Involves large sums of money,
- Is unusually restrictive of competition,
- Is of compelling interest to private firms, or
- Has a history of protests.

Keep in mind: If the contracting office requests a copy, the contracting office is essentially obligated to review it.

(continued on next page)

24.4 Step 2: Determine if a Requirements Analysis Should be Submitted

(continued)

How to Recognize
a Requirements
Analysis

A requirements analysis can take many forms. It may take the form of a one-page justification attached to a requisition or a several hundred page document formally entitled “Requirements Analysis.” It may be called a requirements analysis, requirements study, statement of requirements, or needs determination. The only common element among such documents may be your determination that *the document describes the need*.

24.5 Review the Requirements Analysis

Reviewing a Requirements Analysis

As you learned in Chapter 15, you cannot automatically rely on the requiring activity or technical staff to conduct a thorough requirements analysis without some guidance. Sometimes requirements personnel will do an excellent job defining the technical needs but will overlook the FIRMR's requirements to address such areas as accessibility and records management.

Therefore, when you receive a requirements analysis — whether as part of a standard purchase request, after special request by the contracting office, or as a result of participation on an agency acquisition team — *it is your responsibility to review the document.*

Understanding the Analytical Process

It is important for you to understand that analysis means the methodical application of independent thought to a problem or process, its elements, their relationships, and consequences. *Inherent in the nature of analysis is the lack of comprehensive and set rules that dictate decisions.*

For example, suppose you receive a request from an agency component to contract for support services. Your review of the requirements analysis reveals that the support services would be used to develop a system to transmit information over an existing agency network. However, with your knowledge of your agency's strategic plan and your contracting office's three-year work plan, you know that headquarters plans to replace the existing agency network in twelve months. Because of this fact, *the requirements analysis is deficient.* It fails to address an important factor relevant to planning and specifying the support services acquisition.

This deficiency would exist even if the agency component had followed the FIRMR to the letter.

You need to understand that analyzing a requirements analysis requires first that you review it against the requirements of the FIRMR *and* your agency's requirements. You also analyze a requirements analysis to determine if it appears to be a clear and comprehensive explanation of a need. And you also need to consider it in light of all other related information of which you are aware.

(Topic continued on next page)

24.5 Review the Requirements Analysis *(continued)*

Understanding the
Analytical Process
(continued)

You must understand how broad an analysis of a requirements analysis can be so that you can exercise independent thought and judgment. *Although this chapter provides checklists and questions, it is imperative for you to understand that they are an aid to—not a replacement of—your analysis.*

Review for
Overall Content

Before getting into the details of the requirements analysis, you should complete a quick review of the overall content of the requirements analysis. You first want to understand how the document is organized and make a preliminary assessment of how complete the requirements analysis is.

As you learned in Chapter 16, the FIRMR’s “mandatory” requirements are only *mandatory to the extent that they apply to your acquisition*. For example, the requirement to consider energy efficiency applies only to requirements analyses that will result, in whole or in part, in the purchase of microcomputers. As another example, an acquisition of FIP supplies would be unlikely to require consideration of security.

(Topic continued on next page)

24.5 Review the Requirements Analysis *(continued)*

Review for
Overall Content
(continued)

So the first step in your analysis should be to review what is included in the requirements analysis against what you think should be included. You can use a matrix such as the following, sorted by type of FIP resource, as a tool in your analysis. Remember to add your agency's requirements to your worksheets. Remember also to use the matrix information as an aid to your review—not as strict rules for content.

FIRMR: Content of Requirements Analyses	FIP Systems	FIP Equipment	FIP Software	FIP Services	FIP Support Services	FIP Maintenance	FIP Supplies
Information Needs	A	MA	MA	A	A	MNA	NA
System Life	A	A	A	A	A	A	MA
Description	A	A	A	A	A	A	A
Compatibility Limited Justification	MA	MA	MA	MA	MNA	MNA	MA
Specific Make and Model Justification	MA	MA	MA	MA	MNA	MNA	MA
Security	A	A	MA	A	MA	MA	NA
Accessibility	MA	MA	MA	MNA	MA	NA	NA
Space and Environmental	A	A	MA	MA	A	A	MA
Workload	A	A	MA	A	A	MA	NA
Records Management	A	MA	MA	MA	MA	NA	NA
Energy Efficiency	AM	AM	MA	NA	NA	NA	NA
Standards	A	A	A	MA	MA	NA	MA

Key: A = Applies, AM = Applies only for microcomputers, MA = May Apply, MNA = May Not Apply, NA = Does Not Apply

(continued on next page)

24.5 Review the Requirements Analysis *(continued)*

Example of a Content Review

To use this chart, look under the column or columns of the type of FIP resources you will be buying. Using the example of the handheld computers, you would refer to the FIP equipment column. This would help you determine that you should find information in the requirements analysis related to systems life, description of need, security, space and environmental, and workload factors.

You next consider factors which may apply for equipment: information needs, accessibility, and records management. After thinking about it, you decide that the requirements analysis should address information needs, such as receiving and displaying information about troop deployment, enemy positions, weather information, and command information. You decide, however, that records management factors do not apply to the handheld devices: instead, records management is an issue for the command and control computers (not part of your acquisition) that transmit the information to the handheld computers. You then make a note to check with the program and requirements staff about accessibility. Will the devices be used for emergency calls by wounded soldiers?

Finally, you confirm that since the acquisition will be competitive, the requirements analysis need not provide justifications for compatibility, specific make and model, or other than full and open competition. Nor, you discover, does the requirements analysis indicate any overly restrictive requirements which should be justified.

You can see from this example that determining what should be included in a requirements analysis requires some thought. *Remember: do not rely entirely on the matrix to make your decisions.*

Summarize Initial Conclusions in a Checklist

After your initial review of the requirements analysis, you should record your preliminary determinations. For example, you might complete a checklist like the one on page 24-23. These will then be checked in your detailed review.

(continued on next page)

24.5 Review the Requirements Analysis *(continued)*

Review for Detail

After you have determined what should be included and made some preliminary assessments of what is included, you need to review the document in detail. You may find that information you thought was omitted is actually in the document under a different heading. You also are likely to develop new questions.

In all you read, you should consider:

- Do I understand what the requiring activity needs?
- Do I understand why the requiring activity needs it?
- Is the information clear, complete, and convincing?

The following sections address the content of the requirements analysis, suggesting questions that you might ask yourself during your review. Remember to use the questions as an aid, not as a complete checklist. Remember also to add questions based on your agency's requirements or on your knowledge and understanding. If you need to review the FIRM's requirements, see Chapter 16, "Requirements of a Requirements Analysis."

Information Needs

FIRM 201-20.103-1

Applicability: Does the procurement involve the collection, manipulation, use, transmission, or dissemination of information?

Representative Questions:

- Does the requirements analysis address information needs?
- Does it address information format, media, quantity, integrity, security, and timeliness?
- What information is currently received?
- What additional information is needed?
- What are the sources of the information?
- What information is provided to public and private sector users?
- Where is the information needed?
- What additional information should be provided?
- How is the information interrelated or related to information outside the system?

(Representative questions continued on next page)

24.5 Review the Requirements Analysis *(continued)*

Information Needs (continued)

- How will the information be acquired and disbursed?
 - How much information is needed?
 - How will the information be maintained and its security, confidentiality, accuracy, and completeness assured?
 - How timely must the information be?
 - How must the information be formatted?
 - Are records retention and disposition needs addressed?
 - Are electronic records addressed?
 - Are contractor's responsibilities for providing information clear?
 - If information will be collected from the public, has the agency obtained approval from OMB?
-

System Life

FIRMR 201-20.103-2

Applicability: Applies to all acquisitions, with the possible exception of a procurement for supplies. Note that for support services acquisitions, the "systems" life may be the contract life.

Representative Questions:

- Has the agency established a system life?
 - Is the system life reasonable?
 - Does the system life affect competitiveness?
 - If the system life is more than five years or less than two years, is there a good reason for it?
-

(continued on next page)

24.5 Review the Requirements Analysis *(continued)*

Description of
Needs

FIRMR 201-20.103-3

Applicability: Applies to all acquisitions.

Representative Questions:

- Is the relationship of the requirement to the mission clear?
- Is the need established based on increased economy and efficiency, new or changed program requirements, or deficiencies in current capabilities?
- Are requirements described functionally to the extent possible?
- Are requirements written in terms of performance? Does the agency describe what is needed rather than how to meet the need?
- Are there any restrictive requirements? Are they justified?
- Can the requirements be met using full and open competition? If not, is other than full and open competition justified as required by FAR Part 6?
- Are both quantitative and qualitative requirements addressed?
- Is the basis for qualitative requirements clear and related to the mission?
- Has the requiring agency considered aggregating requirements?
- Has the agency identified the standards which apply?
- Does the requirements analysis clearly answer:
 - What is our function and mission?
 - What is the shortfall in meeting our function and mission?
 - What are our strategic objectives?
 - What is the current system and how effective is it?
 - What resources do we need?
 - What are our problems?
 - What do we need in the future?

(continued on next page)

24.5 Review the Requirements Analysis *(continued)*

Compatibility-Limited Requirements

FIRMR 201-20.103-4

Applicability: Does the procurement specify compatibility with existing resources?

Representative Questions:

- Can a less restrictive requirement be used?
- Is the use of a compatibility-limited requirement justified in accordance with FIRMR 201-20.103-4?
- Is the agency required under the provisions of FIRMR 201-20.203-4 to complete a conversion study? Has the conversion study been completed?

[Remember to review Chapters 17 and 19 if you're unsure how to evaluate this area.]

Specific Make and Model Requirements

FIRMR 201-20.103-5

Applicability: Does the procurement require a specific make and model resource?

Representative Questions:

- Can a less restrictive requirement be used?
- Is the use of a specific make and model description justified in accordance with FIRMR 201-39.6 and FAR 6.303 and 6.304?

[Remember to review Chapter 17 if you're unsure how to evaluate this area.]

Security and Privacy

FIRMR 201-20.103-6

Applicability: Does the procurement involve equipment or information that must be protected from damage, loss, exposure, or unauthorized access?

Representative Questions:

- Does the requirements analysis address security and privacy?
- Are physical and environmental security safeguards addressed?
- Will contractor personnel have access to sensitive information?
- Will contractor personnel be responsible for or have the use of government property?

(continued on next page)

24.5 Review the Requirements Analysis *(continued)*

Accessibility Requirements

FIRMR 201-20.103-7

Applicability: Will the resources be used by handicapped staff? Will the resources will used by the public?

Representative Question:

- Does the requirements analysis address accessibility for individuals with handicaps?

Space and Environmental Needs

FIRMR 201-20.103-8

Applicability: Most procurements require consideration of space and environmental factors.

Representative Questions:

- Does the requirements analysis address the space in which resources will operate?
- Will resources require operating conditions beyond those in a normal office environment?
- Have such factors as cabling, power, surge protection, fire protection, secured access, air conditioning and humidity control, and dust protection been addressed?
- Is it clear whether contractors or the government will provide space?

Workload and Related Factors

FIRMR 201-20.103-9

Applicability: Could the acquisition be affected by a change in workload?

Representative Questions:

- Does the requirements analysis address workload over the systems life?
- Has the requiring activity done an effective job measuring current performance and projecting future needs?
- Will options, upgrades, expansions, or increases be required under the contract to meet future increases in workload?
- Does the requirements analysis address all system areas—such as processing speed, storage, data entry, communications, and output devices—that could reach saturation?

(Representative questions continued on next page)

24.5 Review the Requirements Analysis *(continued)*

Workload and Related Factors (continued)

- Have the effects on contractors of changes in workload been analyzed?
 - Has the effect of lost resources been analyzed and contingency plans developed? [Note that this might be addressed as part of security.]
 - Should options, upgrades, expansions, or increases be solicited and priced?
-

Records Management

FIRMR 201-201.103-10

Applicability: Does the procurement involve the collection, manipulation, use, transmission, or dissemination of information?

Representative Questions:

- Does the requirements analysis address records management for electronic and paper information?
 - Did records management personnel participate in the requirements determination?
 - Has the agency determined how, when, and in what form official agency records will be retained?
 - Will agency functions and decisions be properly documented?
-

Energy Efficiency Requirements

FIRMR 201-201.103-11

Applicability: Does the procurement involve the acquisition of microcomputers, monitors, or printers?

Representative Questions:

- Have energy-efficiency needs been identified?
 - Has use of the low energy efficient power standby feature been addressed in training courses?
-

(continued on next page)

24.5 Review the Requirements Analysis *(continued)*

Review Checklist

The following review checklist may be used as an aid to your review. Remember to add agency-unique requirements to your version of this matrix. Also remember to use independent judgment, applying your knowledge of regulations, procedures, plans, and all other relevant factors.

REVIEW CHECKLIST: REQUIREMENTS ANALYSIS			
FIRMR Content Requirements	Included	Not Included	Does Not Apply
Is the requirement described?			
In terms of mission needs?			
In terms of functional and performance needs?			
In terms of full and open competition?			
Does the requirements analysis address:			
Information needs?			
Systems Life?			
Description of needs, including:			
Quantitative and qualitative requirements?			
Aggregating requirements?			
Security and privacy?			
Accessibility requirements for the disabled?			
Space and environment?			
Workload, current and projected, including:			
Contingency requirements?			
Records management?			
Energy efficiency for microcomputer?			
Standards?			
Are requirements for:			
Specific make and model justified?			
Compatibility-limited requirements justified?			
Other than full and open competition justified?			

24.6 Advise the Requiring Activity of the Need for Revision or Expansion

Advise the Requiring Activity

If your review of the requirements analysis indicates the need for revision or expansion, you need to advise the requiring activity. Depending on your agency's procedures and your relationship with the requiring activity, this contact may be either formal or informal.

For example, in the review of the handheld computers, you might be able to determine by a quick phone call that there is no requirement for accessibility for the disabled. On the other hand, if the agency has not addressed security, that would be a major omission that the contracting office might have to address formally.

Keep in mind that the requiring activity may not have addressed these areas because they do not know about the FIRMR requirements. Also keep in mind that the required information may be in other documents, such as a Security Plan. In this case, reference to the other documents may be sufficient.

24.7 An Example of a Requirements Analysis for Review

Example

As you know, the content of a requirements analysis depends on the specific requirements of that acquisition. The following example concerns a hypothetical requirement for a computer imaging system to store and retrieve security-related documents for an agency security office.

As you read this example, think of any information that was left out or for which you would request clarification.

REQUIREMENTS ANALYSIS

Agency Mission

The mission of Desert View Laboratory is to conduct classified research projects. In the past forty years, it has conducted major projects for the Departments of Defense and Energy. However, with the end of the Cold War, the laboratory has been directed by executive order to investigate and propose scientific research projects which have greater application to civilian uses.

One result of this mandate has been increased access to the laboratory by non-defense private sector companies to explore and discuss research projects. This has greatly increased the number of visitors each year.

Major Work Products

The major work products produced at Desert View are studies, including feasibility studies, and test results, for “cutting edge” technical projects that require the latest and most sophisticated scientific equipment not generally available elsewhere. Most projects involve electronics, radiation, exotic new materials and new chemical processes.

The equipment includes extremely powerful computers and other state-of-the-art scientific equipment. Although the technical labs and functions are very highly automated, some administrative functions are not necessarily automated to the degree found in other Government agencies. Some administrative functions, including security record-keeping, are still largely manual. For example, individual visitor records are still logged by hand into a manual record.

This was not a problem in the past, because there were relatively few visitors authorized access. However, under the new visitation rules, the number of visitor records being processed has increased by more than 1,000 percent in the past year and is expected to grow even more.

(Example continued on next page)

24.7 An Example of a Requirements Analysis for Review *(continued)*

Information Flows

This requirements analysis concerns only the unclassified aspects of the security record-keeping function. The information must consist of a copy of the visit request, with attached approval and photographic image. Information on visitors must flow as follows:

- from the Desert View security office, to the Department of Defense (Washington, DC), and to the agency headquarters in Almagordo, NM.
- to the Desert View security office, from those locations.

Description of Current System

Presently, the visit request arrives in paper (letter) format, which must be processed (approved or denied) within three working days. The visit request is processed entirely at the Desert View security office. An approval/denial form (DV Form S-1) is then sent to the requester. A copy of the visit request is also sent by mail to the agency headquarters.

Because of the highly classified nature of the lab, each visitor who is not on the current access roster must apply separately before each visit. Each request, with record of disposition, must then be filed at the security office. Each time a request is received, the DV Form(s) on record for that individual visitor must be retrieved from the files and the master log of visitors updated. Under past conditions (before the executive order), this normally required approximately five minutes for each visitor. All visitor files were easily maintained in two standard four-drawer filing cabinets.

The personnel maintaining these files include two GS-9 clerks and one GS-12 supervisor. Their limited experience with computers consists of the ability to do word processing of unclassified business type letters.

The current system described above has not been effective in coping with the growing number of new visitors. Processing and master logging times for individual visit requests have grown from approximately five minutes per request two years ago, to more than ten minutes per request in January of this year. The number of filing cabinets has expanded from two to twenty and is expected to grow further.

No additional personnel have been authorized. As a result, it has been necessary to authorize more overtime each month, to cope with the growing backlog of requests. During the past year, it was necessary to authorize 612 hours of overtime to accomplish processing, filing and retrieval of the required records. During vacation or other reduced staffing periods, the backlog grows quickly and efficiency and reliability decline. When only one or two of the three staffers are available, the error rate also grows and some records are misfiled, requiring added time later to locate and refile.

(Example continued on next page)

24.7 An Example of a Requirements Analysis for Review *(continued)*

Opportunity for New Automation

The advent of commercially available automation systems for processing and archiving this type of information offers great potential for increasing efficiency and effectiveness, without an increase in staffing. For example, a review of document imaging and archiving systems recently developed for insurance claims offices shows that similar equipment (hardware and software) appear to be capable of greatly increasing efficiency. The insurance industry increasingly uses such new equipment to process, store and electronically transmit multipage claim forms, complete with an electronic image of the damaged object (house or car). Retrieval time from electronic files within the office is less than ten seconds per request.

Proposed Automation Project

It is therefore proposed that a security identification and filing system, similar in concept to the one used by the insurance industry, be established to allow personnel at the Mountain View security office to process, store, electronically transmit and retrieve visitor requests and records.

The commercially available systems require:

- a desktop or work station with at least 24 megabytes of random access memory (RAM), at least 1.1 gigabytes of read only memory (ROM) and, preferably, an operating system that operates at a speed of at least 66 megahertz. Such systems are offered by several manufacturers at prices ranging from \$5,800 to \$7,700 but are not currently available on the GSA schedules. At least two terminals (one backup) are recommended for each of the three sites (Desert View, Washington, and Almagordo, NM).
- an electronic camera for entering images digitally in black and white or color. These must be compatible with the type of computer or work station selected and are offered for approximately \$4,000.
- an electronic scanner for scanning and entering paper copies of documents (texts and images) into the computer memory. Copies are available from various offerors at prices ranging from \$2,000 to \$9,000.
- a commercial quality laser printer, capable of printing at least 10 pages per minute (black and white) or 1 page per minute (color). Such printers are currently available on the current GSA schedules for \$3,000.
- training for three persons, estimated at \$500 per person, based on industry experience, at Desert View and one person at each of the other two sites.
- cabling and system integration. These costs are estimated by the commercial (insurance industry) sources to be approximately \$500 per terminal.
- maintenance costs (per terminal) based on commercial experience are \$300 per year.
- documentation (including manuals) is estimated to be \$500.
- data and application conversion is estimated at 300 hours of labor X \$50 equals \$15,000.
- communications/transmission costs are estimated (based on industry sources) to be \$15,000 per year, primarily for data (facsimile) transmission.

SUMMARY

In this chapter, you learned how to analyze a requirements analysis to determine if the mandatory and nonmandatory requirements are included. In the next chapter you will learn about the analysis of alternatives and its role in the acquisition process.

CHAPTER 25

DETERMINING IF CONVERSION STUDIES ARE NECESSARY

Chapter Vignette

“What about compatibility?” Mark asked. “Suppose we buy some hardware or software which promises to do everything but then we find out that it does not work with our original hardware or software? I imagine that can cause a lot of red faces.”

“Absolutely,” said Marcia, “and that is why you have to determine if conversion studies will be needed. If you buy hardware, you must consider whether it will run existing software, and if you buy software, you have to think about whether it will run on the existing hardware. In some cases, the answer is an easy ‘yes’ or ‘no,’ but in other cases, the requiring agency must also decide whether to spend money on conversion of existing software. Of course, to know that, you must first know if a conversion study is needed”

Course Learning Objectives

At the end of this chapter, you will be able to:

Overall:

Predict whether to require the ability to run existing software without modification, and, if not, make the cost of converting existing software a factor in selection, whether for all software or for selected software.

Individual:

- 25.1 Define when a conversion study is required.
- 25.2 Predict the restrictiveness of the requirement.

Chapter Overview

Scope

This chapter presents the information you will need to determine whether a conversion study is needed for a proposed FIP resource acquisition. It will explain how to predict the restrictiveness of a requirement and how, from the initial determination, to determine the appropriateness of a compatibility-limited requirement and its effect on the acquisition.

It will provide examples of buying original or replacement hardware and in buying replacement hardware, ability to run existing software without modification; and how to determine if the cost of converting existing software should be used as a factor in source selection.

Usually in a large scale acquisition, the requiring activity will already have conducted a thorough conversion study. Sometimes the conversion study will be used to support a compatibility-limited requirement and may be submitted as part of the request for an Agency Procurement Request (APR). However, you may find that sometimes, a requiring activity may generate a requirement for hardware or software without consideration as to whether a conversion study is required. This is more often the case with software.

Changes in software occur very frequently, sometimes every year, and there are many proprietary features that make some versions of software fully or partially incompatible with the existing version(s) which the Government may already have.

When this happens, there may be a hidden cost of conversion which is not fully considered by the requiring activity.

Keep in mind that an agency need not be concerned about conversion of ALL its software. It may be that only a small percentage of the total software cannot be converted, but that small amount of selected software may be so important that it seriously affects the agency's mission performance.

For this reason, you must understand when a conversion study may be needed in the overall acquisition process and in development of an APR package.

Chapter Overview *(continued)*

Topics in This Chapter

This chapter includes the following topics:

SECTION	TITLE	PAGE
25.1	When Conversion Studies Are Required	25-5
25.2	Predicting Restrictiveness of a Requirement	25-9

References

You should have the following references available to understand this chapter:

- FIRMR 201-20.203-4
 - FIRMR Bulletin C-13, *Conversion of Federal Information Processing (FIP) Resources*
-

25.1 When Conversion Studies Are Required

What is a
“Conversion
Study?”

A *conversion study* is a study performed by technical personnel to determine whether existing software will operate and be compatible with another FIP resource to be acquired, such as new FIP hardware or new software.

A *software conversion* is the actual modification or altering of software programs and data, such as computer files, so that they can be used on the newly acquired system.

When a
Conversion Study
is Required

FIRMR 201-20.203-4 requires that Federal agencies perform a conversion study for ALL acquisitions for FIP resources, EXCEPT for:

- initial acquisitions where no FIP resources exist **OR**
- acquiring FIP equipment peripherals only (examples are printers or scanners) **OR**
- exercising a purchase option under a leasing agreement.

So, you can be pretty certain that if an agency already has FIP resources on hand, it will be required to perform a conversion study and submit the results as part of the APR package if it requests a DPA.

In other words, any time an agency changes FIP hardware or software, it probably requires a conversion study. However, you should be especially watchful for a conversion study when an agency:

- intends to modify the operating software in the existing system
- replaces one set of software with software from a different manufacturer or vendor
- keep old records or files developed with previous software and occasionally refer to it
- uses software that it developed or modified “in house”
- intends to buy original or replacement hardware and it is not certain whether existing software will run on the new hardware without extensive modification

The major EXCEPTION, of course, occurs when an agency already is using a leasing agreement with an option to purchase (LWOP). In that case, you do NOT require a conversion study.

25.1 When Conversion Studies Are Required *(continued)*

Importance of a Conversion Study

A conversion study is important because it determines whether an “older” software package will operate successfully with the new commercial software to accomplish one or more of the agency’s missions, such as payroll or personnel maintenance. You can see that an agency might have to redo thousands of files if it acquired new computers that could not “read” older files.

In addition to its importance in the acquisition process, a conversion study is also important in the development and submission of an Agency Procurement Request Package for approval by the GSA.

Failure to accomplish a conversion study can be very serious. For example, consider a case when a payroll department changes to new software and finds that it cannot read the existing pay records for all employees.

When is a Conversion Study Done?

A conversion study is completed before the completion of the Analysis of Alternatives and after the requirements analysis. If software conversion is identified as a possible requirement early on in the requirements analysis during acquisition planning, much time can be saved in the acquisition process. It can be important to start early, because a conversion study can be very complex for a large scale acquisition.

(Note - for a detailed discussion of the Analysis of Alternatives, see Chapter 26, “The Purpose and Content of an Analysis of Alternatives.”)

25.1 When Conversion Studies Are Required *(continued)*

Contents of a Conversion Study

The exact contents of the conversion study will depend on the specific acquisition, but the conversion study should include, as a minimum, those contents listed in FIRMIR Bulletin C-14, as shown in the table below.

Minimum Contents of a Conversion Study		
	Contents	Descriptions
1.	Problem Definition	A brief description of why the conversion study is being done and what new FIP resource is to be acquired, if possible described in functional terms, such as “a computer capable of reading all files developed on the UNIX operating system.”
2.	Inventory of Components for the Current Systems	Examples include the computer terminal(s), the server or main computer, and any key peripherals, such as printers
3.	Description of Operating System	For example, “UNIX,” “DOS 6.0,” or “Apple System 7.1”
4.	Inventory of the Application Programs and Data files to be Converted	Such as “2,000 employee data files in WordPerfect 5.1,” “250 files in Quattro Pro 2.0,” “4,000 files in Enigma Base 4.7,” etc.
5.	General Description of the Target Environment	Includes performance requirements and constraints or limitations on the requirement dictated by user needs (for example, “the new computer LAN will be required to access, process and store the equivalent of 20,000 pages of text per working day and will be operated by inspection personnel in Grades GS 10 through 12 who are not trained computer operators and must not require more than two days of training in the new LAN system.”)
6.	Recommended Approach to Accomplish the Conversion Tasks	Includes analysis of alternative approaches, with a benefit/cost analysis for each approach:
7.	Cost and Risk Reduction Recommendations	Specific agency actions to be taken to reduce the cost and risk of future conversions.

You can see that all these contents can produce a large document, which will be part of the APR “package” submitted by an agency to obtain a DPA.

(continued on next page)

25.1 When Conversion Studies Are Required *(continued)*

Conversion Costs

One important part of the conversion study is the estimate of *conversion costs*. In some cases, converting to new hardware or software can be very expensive, especially if there are very large files to convert. Therefore, the cost of conversion is ALWAYS a factor in the acquisition, although it may not be the most important factor.

FIRMR 201-20.203 requires agencies to include any costs that can be stated in dollars, as well as other expenses directly related to the conversion. For example, one cost that you can calculate in dollars is the cost of labor hours required for converting old computer files. You would also include travel costs for bringing in programmers from another site to assist with the conversion.

Costs Not Included

However, there are some costs that should NOT be included in the conversion costs. Do NOT include costs for:

- Converting existing software and databases that would be redesigned regardless of whether or not augmentation or replacement FIP resources are acquired.

Example: an agency plans to redesign a personnel database without buying new hardware or software

- Purging duplicate or obsolete FIP software, databases, and files.

Example: an agency intends to destroy all files that are more than five years old.

- Development of documentation for estimating FIP application software

Example: an agency intends to contract for the development of a manual for the LAN system manager.

- Improvements in management and operating procedures.

Example: an agency intends to contract with a consultant to train personnel to use an existing database more efficiently.

25.2 Predicting Restrictiveness of a Requirement

Restrictiveness of Requirement

Sometimes, a conversion study may come to the conclusion that a conversion is not feasible, or would be so difficult and expensive (based on benefit/cost analysis) that conversion is not really an advantageous alternative. In such a case, the agency might conclude that any new FIP hardware or software must therefore be compatibility-limited or even a specific make and model.

This type of conclusion places great restriction on the scope of competition, and should be avoided if possible, unless it can be fully justified. So, if you receive a requirement which is either “compatibility-limited” or for a “specific make and model,” you should also expect a complete justification, based on a conversion study, including a benefit/cost analysis.

In fact, when you read the results of the conversion study, *you may have to return the requirement to the agency for further justification* if the conversion study does not support the conclusion that only a compatibility-limited or specific make and model specification will meet the requirement.

Predicting the Restrictiveness

Often, you can predict the restrictiveness of the requirement rather easily by reviewing the conditions that apply to the acquisition. Consider the following examples:

Example 1 - An agency must convert sensitive personnel and employment data for 15,000 employees within a period of 90 working days, using new software. After conversion, the old files will be removed and stored in an archive, but cannot be destroyed without violating agency directives. The costs of conversion are estimated at \$300,000 for labor alone for Government programmers and systems managers. The agency also calculates there is a very high risk (more than 90%) that another manufacturer’s software will not be able to convert the data files without major problems which might require another \$85,000 in trouble shooting costs. These costs will exceed the agency’s budget for the operating year. The agency therefore concludes that a “compatibility-limited” requirement for the new software is reasonable.

Given only this information, you could reasonably conclude that the agency’s requirement was reasonable, justified and restrictive, and would lead to less competition.

(Topic continued on next page)

25.2 Predicting Restrictiveness of a Requirement *(continued)*

Predicting the
Restrictiveness
(continued)

Example 2 - An agency has a requirement to convert to newer database application software for its security office files concerning unclassified visits by non-agency personnel. Since the files are only temporary, they may be destroyed after 60 days. As of January first, all new interviews will be completed using the new software. There is no need to convert the old files to the new software. Nevertheless, the agency specifies a compatibility-limited requirement.

Given only this information, you could reasonably conclude that a compatibility-limited requirement does not seem justified and that it would unnecessarily restrict competition.

Example 3 - A regulatory agency has a requirement to obtain new laptop computers for its inspector work force, to replace nine year old desk top models which are no longer manufactured. The agency has a large number of old files, of which approximately only 2,000 pages of text must be saved and converted. The agency's conversion study estimates a cost of \$5,000 to convert the old files and specifies acquisition of specific make and model laptop computers made by XYZ Corporation, because the older desk top models were also made by this manufacturer, although the new computers will have a different operating system.

Given only this information, you could reasonably conclude that the requirement for a specific make and model does not seem to be supported by the conversion study and will unnecessarily restrict competition.

Estimating Costs
for Conversion of
Software

The requiring agency may not have estimated, or may not know how to estimate, the cost of conversion. If this is the case, you should tell the agency that they can use a model developed for estimating conversion costs for software.

Federal Software
Management
Center

You can obtain the model by contacting the Federal Software Management Center (KRS). The Center also provides assistance on all aspects of software management to Federal Agencies, including:

- conversion studies
 - conversion of software
 - improvement of software
 - software engineering
 - software tools
 - advice on training
 - references
 - research
-

(continued on next page)

25.2 Predicting Restrictiveness of a Requirement *(continued)*

Federal Software
Management
Center

You can contact the Federal Software Management Center by calling:

(703) 756-4500

Considerations in
Using the Model

When the requiring agency uses the conversion study model, it must make two major considerations:

1. The agency must consider the cost of conversion to a new software, versus the cost of rewriting the existing programs that it now uses.
2. The agency must also consider whether it will change (or has already changed) the programming languages.

Use of the conversion study model forces the requiring agency to estimate all the input factors, such as complexity of files, archives and records, the completeness of the available documentation, scope of required training, and other factors which may impact on cost of conversion.

Predicting
Restrictiveness

When a conversion study has been properly completed, it may indicate that the only favorable alternative for acquisition is to buy a “name brand or equivalent” or a “compatibility limited” software, so that the new software will be compatible with the older software and the records and files on hand.

If the conversion study supports such a restriction on the acquisition, you should be able to use the conversion study as justification.

You should be able to predict, by reading the acquisition plan and conversion study, what the degree of restrictiveness will be. Based on the results of the conversion study, the language should clearly identify and support any requirement for restrictiveness.

(continued on next page)

25.2 Predicting Restrictiveness of a Requirement *(continued)*

Examples

For example, if the only practical alternative is software which must be obtained from the original manufacturer, the language in the conversion study findings and in the acquisition plan should clearly support this requirement for restrictiveness. An example of how such highly restrictive language might look is:

“Based on the findings of the conversion study, we have concluded that it is necessary to obtain software which is 100% compatible with our existing software and fully supports our frequent access to extensive files without the costs of conversion to another software package.”

Second example - If the conversion study conclusion is that the acquisition should be “compatibility-limited,” look for language that is a bit less restrictive, such as:

“Based on the findings of the conversion study, we have concluded that it is necessary to obtain only software that is compatible with the existing software.”

You should look for examples of similar language which indicate restrictiveness in the conversion study and the acquisition plan. On the other hand, unless the conversion study supports restrictions on the acquisition process, you should always maximize competition.

Decision Table

The following decision table summarizes the actions that you should take to determine if a conversion study is necessary and whether it justifies a restriction on competition in the acquisition process.

Decision Table for a Conversion Study		
If...	Then...	Otherwise...
<ul style="list-style-type: none"> An agency will acquire FIP resources where none exist OR... <ul style="list-style-type: none"> An agency will acquire only peripherals OR... <ul style="list-style-type: none"> An agency is exercising an option to purchase under an existing lease agreement... 	A conversion study is NOT needed.	<p>You should require a conversion study.</p> <div> <p>Note that if the conversion study supports a <i>compatibility-limited</i> or a <i>specific make and model</i> requirement, then the requirement will restrict the competition</p> </div>

SUMMARY

In this chapter, you learned how to predict whether to require the ability to run existing software without modification, and if not, make the cost of converting existing software a factor in selection (all software or selected software). In the next chapter, you will learn how to analyze a proposed requirements analysis to determine if the mandatory and nonmandatory requirements are included in the requirements documentation.

CHAPTER 26

THE PURPOSE AND CONTENT OF AN ANALYSIS OF ALTERNATIVES

Chapter Vignette

“I can see that analyzing and establishing requirements is important, but how do we get from deciding what we need to how we will buy it? There are so many options that it must be hard to identify the best single alternative in a FIP acquisition,” said Mark.

“It can seem complicated,” Marcia replied, “but that is why we do an analysis of alternatives to determine the best or most advantageous alternative among those available. As was true with the requirements analysis, there are some mandatory and nonmandatory requirements that are considered. While it’s important to consider mandatory sources such as FTS2000, it’s also important to consider existing nonmandatory contracts — such as multiple award schedule contracts. These can save a lot of money by avoiding the expense of contracting. You will see that just thinking about possible alternatives can greatly improve the economy and efficiency of the acquisition process.”

Course Learning Objectives

At the end of this chapter, you will be able to:

Overall:

Explain the purpose and content of an analysis of alternatives and describe its relationship to the requirements analysis and the overall acquisition process.

Individual:

- 26.1 Define “analysis of alternatives,” “the most advantageous alternative,” and “conversion study.”
- 26.2 Demonstrate the relationship of the requirements analysis and the analysis of alternatives to the acquisition process.
- 26.3 List the minimum alternatives to be included in the analysis of alternatives.
- 26.4 Identify other alternatives to consider in the analysis of alternatives.
- 26.5 Identify mandatory and nonmandatory requirements to be included in the analysis of alternatives.
- 26.6 Identify the areas unique to commercial software which must be addressed in a requirements analysis and analysis of alternatives.
- 26.7 Demonstrate how the analysis of alternatives improves the specification.
- 26.8 Summarize the determination of the best source(s).

Chapter Overview

Scope

This chapter discusses the purpose and content of an analysis of alternatives in a FIP resources acquisition. You should know that an analysis of alternatives helps determine *how and from what sources the needed goods or services will be acquired*. Therefore, you need to understand that the alternatives analysis determines the sources you will solicit to meet your agency's need.

The alternatives analysis is the second major pre-procurement study, typically conducted after the requirements analysis has been completed and documented. At this time in acquisition planning, agencies need to decide:

- What alternatives are available for me to meet my need?
- Which alternative is the most cost-beneficial?

These are two distinctly different questions. The first seeks to determine *many ways* to meet the need. The second seeks to determine the *best way* to meet the need. In other words, answering the second question measures the alternatives found when answering the first question.

For large acquisitions, these two questions are often answered with two separate documents: the alternatives analysis and the benefit-cost analysis. For smaller acquisitions, both questions may be answered by a single document.

We will consider the two questions separately. In this chapter, we will focus on the process of identifying alternatives. This is the fundamental nature of an alternatives analysis. In Chapter 28, *Benefit-Cost Analysis and Present Value Discounting*, we will focus on the process of selecting the best alternative for acquiring needed goods and services.

(continued on next page)

Chapter Overview *(continued)*

References

In order to understand and perform the tasks discussed in this chapter, you may need to refer to the following references. They provide information not only on analyzing alternatives, but also about the types of alternatives available through Government programs and contracts.

- FIRMR 201-20.2, especially 201-20.203-4
 - FIRMR 201-24
 - FIRMR 201-39.8 and 201-39.13
 - DFARS 239.001
 - FIRMR Bulletins C-1 *Sharing Telecommunications Resources*
 - C-2 *Disposition and Reuse of FIP Equipment*
 - C-9 *Nonmandatory GSA Services and Assistance Programs*
 - C-11 *Sharing of Automatic Data Processing Resources*
 - C-12 *Federal Software Exchange Program*
 - C-14 *Conversion of FIP Resources*
 - C-15 *Mandatory Local Telecommunications Services*
 - C-18 *FTS2000*
 - C-19 *Information Systems Security (INFOSEC)*
 - C-20 *National Security and Emergency Preparedness (NSEP) Telecommunications*
 - C-21 *Purchase of Telecommunication Services (POTS) Contracts*
 - C-24 *Use of Contracts Designated by GSA for Governmentwide Use by Federal Agencies*
 - C-27 *Reuse of Outdated FIP Equipment*
 - C-29 *Acquisition of Used Computer Equipment by the Federal Government*
 - C-30 *Replacement of, and Screening for, FIP Equipment under Exchange/Sale Authority*
 - C-32 *Vendor Provided FIP Training*
 - C-34 *Video Teleconferencing and Use of FIP Audiovisual and Telecommunications Resources*
 - GSA's *Overview Guide: Acquisition of Information Resources*
 - GSA's *A Guide for Requirements Analysis and Analysis of Alternatives*
-

Chapter Overview *(continued)*

GSA's Bulletin Board System

GSA maintains an electronic bulletin board with up-to-date information on its programs and contracts, including multiple award schedule and governmentwide contracts. Refer to FIRMR Bulletin C-17 or call GSA on (202) 501-1401 for further information.

Topics in This Chapter

The major topics in this chapter are:

SECTION	TITLE	PAGE
26.1	Key Definitions	26-6
26.2	The Analysis of Alternatives and Its Relationship to the Requirements Analysis and the Acquisition Process	26-7
26.3	Required Alternatives to Consider in the Analysis of Alternatives	26-14
26.4	Other Alternatives to Consider in the Analysis of Alternatives	26-16
26.5	Content of the Analysis of Alternatives	26-18
26.6	Areas Unique to Software	26-20
26.7	How the Analysis of Alternatives Generates Improvements in the Specification	26-22
26.8	Summary: Determining the Best Source(s)	26-23

26.1 Key Definitions

Introduction	This section defines certain key terms that you must know to understand the role of the analysis of alternatives in the overall acquisition process.
--------------	--

Definitions	In order to understand the concept of an analysis of alternatives, you should be familiar with the key definitions in the following table.
-------------	--

KEY DEFINITIONS
Analysis of alternatives —a process to identify, compare, and evaluate various alternatives to determine which alternative is the most advantageous to the Government. (FIRMR 201-20.2)
Most advantageous alternative —that alternative which provides the greatest value to the Government over the system life, in terms of price, cost, quality, performance and any other relevant factors. (FIRMR 201-20.203-4)
Conversion study —a study conducted to determine the costs, risks, and magnitude of conversion from installed FIP resources to augmentation or replacement resources. (FIRMR 201-4.001 and 201-20.203-4)

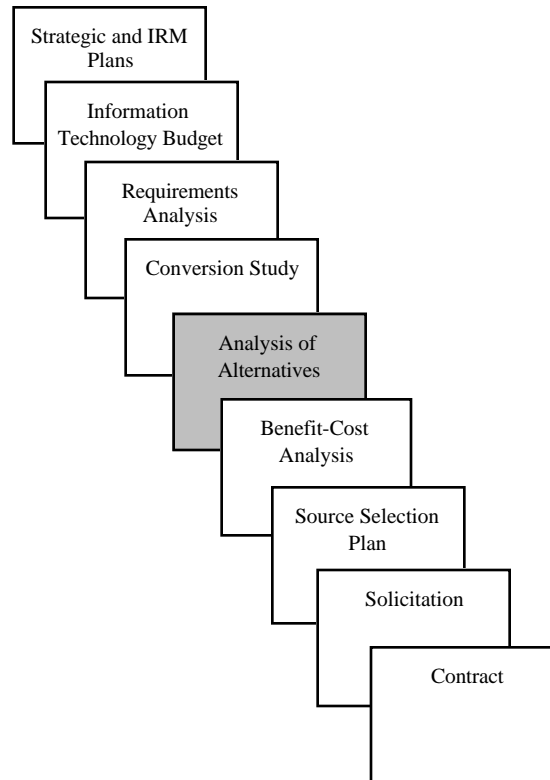
26.2 The Analysis of Alternatives and Its Relationship to the Requirements Analysis and the Acquisition Process

Purpose of the Analysis of Alternatives

The ultimate purpose of an analysis of alternatives is *to select the one alternative that is most advantageous to the Government for the acquisition of FIP resources*. The analysis of alternatives cannot be done until the requirements analysis is complete.

Acquisition Process

As you know, there are many steps required from the time that the need for FIP resources is first conceived until that resource is being used to satisfy mission needs. You have studied many of these preliminary steps. The following illustration is a *simplified overview* of the acquisition process. It shows the relationship of the alternatives analysis to the steps you've already studied and to such major contracting steps as developing the source selection plan, preparing the solicitation, and awarding a contract. Note the relationship of the alternatives analysis within the overall acquisition life cycle.



(continued on next page)

26.2 The Analysis of Alternatives and Its Relationship to the Requirements Analysis and the Acquisition Process *(continued)*

Steps in the Analysis of Alternatives

Although the scope and appearance of alternatives analyses may vary, a comprehensive analysis of alternatives follows certain steps:

Step 1 - Determine objectives, assumptions, and constraints

Step 2 - Identify alternative solutions

Step 3 - Determine risks and effects of each solution

Step 4 - Analyze, compare, and rank the alternative solutions

Step 5 - Determine costs and benefits of several solutions

Step 6 - Select most advantageous alternative

Remember that the last two steps may be part of the analysis of alternatives or addressed in another document called the benefit-cost analysis. In this text, we will address the final steps in Chapter 28, *Benefit-Cost Analysis and Present Value Discounting*. The rest of this chapter provides detail on the first four steps.

Step 1: Determine Objectives, Assumptions, and Constraints

By the time the alternatives analysis is prepared, your agency has already analyzed its requirements. As you learned in Chapter 22, agencies frequently address goals and objectives, constraints, and assumptions in the requirements analysis. So you may find that the alternatives analysis does not address these factors — or reiterates those developed in the requirements analysis.

As you learned, constraints are factors that affect and limit in some way the solutions possible for the acquisition. Constraints may relate to laws or regulations or technological, socio-political, financial, or operational conditions. For example, if Congress mandates a source—such as acquiring supercomputers from American firms—then agencies' choices are constrained: they must conform to the limitation. Another common constraint is the need for compatibility, proven and justified by the conversion study.

(Topic continued on next page)

26.2 The Analysis of Alternatives and Its Relationship to the Requirements Analysis and the Acquisition Process *(continued)*

Step 1: Determine objectives, assumptions, and constraints (continued)

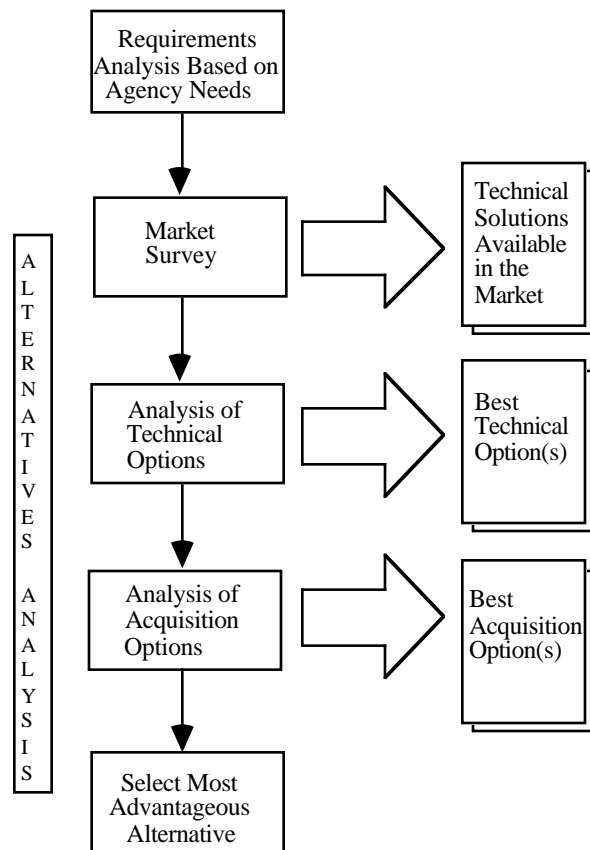
Assumptions are factors predicted to apply to the program or project that affect the acquisition. For example, the system life and workload projections are common assumptions. Other assumptions might relate to cost, resource, program, or technical factors, such as availability of a new software release or generation of equipment.

Step 2: Identify alternative solutions

There are three major stages involved in identifying alternatives:

- Surveying the market
- Identifying technical solutions
- Identifying acquisition (source) solutions.

The process is represented in the flowchart below.



(Topic continued on next page)

26.2 The Analysis of Alternatives and Its Relationship to the Requirements Analysis and the Acquisition Process *(continued)*

Step 2: Identify
alternative
solutions
(continued)

Note that the alternatives analysis considers and documents the results of market research. This first major task in the alternatives analysis—surveying the market—has four main objectives:

1. *Verify the technical feasibility* of the agency's requirements (as they are described in the requirements analysis);
2. *Determine sources and the extent of competition;*
3. *Collect pricing information for comparative cost analysis;* and
4. *Determine the industry's norms and business practices* for this FIP acquisition.

Although the market survey is normally done by personnel from the requiring agency, *you may be asked for assistance*. You should ensure that the market survey is thorough and reveals the range of technical options available in the market. For further information, see Chapter 16, *Market Research for Acquisition of FIP Resources*.

The second stage is the analysis of technical options or technical alternatives. This stage considers what technological solutions could support the need. *The initial purpose is to identify a range of solutions—not to eliminate all but one*. Although some alternatives and options which are NOT technically feasible will be eliminated early, agencies should seriously consider more than one technical solution.

The third stage of the analysis of alternatives is the analysis of acquisition (or source) alternatives. These include such options as GSA mandatory use contracts (such as FTS2000) and optional use sources (such as excess equipment). Again, the purpose is to consider all reasonable source solutions.

Of course, during the analysis of acquisition alternatives, your agency would not waste time on those alternatives which have already been eliminated for technical reasons in the requirements or alternatives analysis. For example, you would not consider GSA's mandatory local telecommunications service if you have a need outside of the areas served by GSA's program.

(Topic continued on next page)

26.2 The Analysis of Alternatives and Its Relationship to the Requirements Analysis and the Acquisition Process *(continued)*

Step 2: Identify
alternative
solutions
(continued)

The table below provides examples of the types of technical and acquisition alternatives that your agency's program and technical staff may consider. You will learn more about alternatives in sections 26.3 and 26.4 of this chapter.

REPRESENTATIVE TECHNICAL AND ACQUISITION ALTERNATIVES	
Alternative Platforms/Capacity Enhancements	Alternatives for Implementing Applications
Platform (or architecture) alternatives range from stand-alone solutions to mainframes to distributed processing networks. Requirements for capacity increases may affect platforms as well as other options.	Alternatives range from modifying current systems, transferring and modifying another system, incorporating off-the-shelf solutions, to initiating custom development (when more cost-effective and timely do not exist).
Architecture <ul style="list-style-type: none"> • Client/server LAN and micros • Distributed • Mainframe • Minicomputer • Work station • Microcomputer (stand-alone) Mandatory or Optional Use Contracts Outsourcing (Contracting out) Acquire Services (other than equipment) <ul style="list-style-type: none"> • From other agencies • Commercially Reconfigure Existing Resources Reassign, Reuse, or Share Resources Use of Non-automated Alternatives <ul style="list-style-type: none"> • Reallocating or increasing personnel • Manual systems or work processes 	Off-the-shelf Software <ul style="list-style-type: none"> • Generalized, such as DBMS • Specialized, such as payroll Transferring/Modifying another System <ul style="list-style-type: none"> • Using In-house Services • Using Other Agency Services • Using Contract Services • Using a Combination Modifying or Redesigning Current Systems <ul style="list-style-type: none"> • Using In-house Services • Using Other Agency Services • Using Contract Services • Using a Combination Custom Development <ul style="list-style-type: none"> • Using In-house Services • Using Other Agency Services • Using Contract Services • Using a Combination Mandatory or Optional Use Contracts

(Table continued on next page)

26.2 The Analysis of Alternatives and Its Relationship to the Requirements Analysis and the Acquisition Process *(continued)*

Step 2: Identify
alternative
solutions
(continued)

Alternative for Acquiring Services	Alternatives for Obtaining Support Services
Services include teleprocessing, computer time, electronic mail, voice mail, and cellular telephone. Alternatives include using both in-house and contractual solutions, as well as sharing or borrowing resources.	Support Services includes source data entry, training, custom software development, systems analysis and design, software conversion, facilities management, maintenance, equipment operation, network management, studies (e.g., requirement analysis and analysis of alternatives, and evaluation.)
Increase In-House Resources	Increase in Permanent Staffing
In-house Development of Service Capability	In-House Developing of Service Capability
Resources Sharing with other Agencies	Resources Sharing with other Agencies
Mandatory or Optional Use Contracts	Mandatory or Optional Use Contracts
Contractual Commercial Services	Contractual Commercial Services
Temporary Commercial Services	<ul style="list-style-type: none"> • Manpower Based • Project Based • Full Service, Per Call, On Call
	Temporary Commercial Services

Step 3: Determine
risks and effects

Once all viable alternatives are identified, your agency must determine the risks and effects for each. It could be that excessive risk may eliminate a technologically viable alternative from consideration.

For example, security considerations might require centralizing critical information in a secure environment rather than distributing processing in geographically dispersed (and less secure) offices. Although both centralized and distributed processing are viable technological alternatives, risk factors require a centralized environment. Another common example that restricts the solution is the risk of failure proven in a conversion study, thereby justifying a compatible or specific make and model acquisition.

(Topic continued on next page)

26.2 The Analysis of Alternatives and Its Relationship to the Requirements Analysis and the Acquisition Process *(continued)*

Step 3: Determine risks and effects
(continued)

Risks and effects may relate to:

- Program impacts
 - Equipment impacts
 - Software impacts
 - Information impacts
 - Organizational impacts
 - Operational impacts
 - Developmental impacts
 - Space and facility impacts
 - Cost impacts.
-

Step 4: Analyze, compare, and rank the alternative solutions

If more than two or three viable alternatives have been identified, your agency should rank alternatives so that only those most likely to achieve the mission and objectives efficiently, effectively, and economically are analyzed during the benefit-cost analysis. (This is because analyzing costs and benefits is expensive.) *Ranking is the first step in determining the most advantageous alternative.*

The method used to rank alternatives should be documented in the alternatives analysis. Ranking criteria should be tailored to the acquisition and relate to the acquisition mission and objective. Examples of ranking criteria include:

- Minimizing personnel expenses over the systems life,
- Limiting development time so resources are in use quickly,
- Retaining a centralized information repository for reasons of security, *or*
- Distributing processing to minimize point-of-entry delays.

The top two or more alternatives are then evaluated for cost and benefits. You will learn more about this in Chapter 29, *Benefit-Cost Analysis and Present Value Discounting*.

26.3 Required Alternatives to Consider in the Analysis of Alternatives

Required Acquisition Alternatives to Consider

FIRMR 201-20.203-1, *Analysis of Alternatives*, identifies certain alternatives that agencies must consider when conducting an alternatives analysis. These alternatives are acquisition or source alternatives that are typically considered after technological alternatives have been identified. These acquisition alternatives include:

- Using GSA's mandatory-for-use programs when they will meet requirements,
- Using GSA's mandatory-for-consideration programs when they will meet requirements *and* their use is the most advantageous alternative,
- Reassigning or reutilizing FIP resources no longer needed for other purposes in the agency or other agencies,
- Sharing FIP resources,
- Acquiring resources by contracting, including small purchase and small and disadvantaged business set-asides.

Agencies consider these alternatives *to the extent that they apply to the acquisition*. Note that contracting would be considered only after other alternatives are eliminated.

Mandatory-for-use Programs

FIRMR 201-24.1 identifies GSA's mandatory-for-use programs. These sources must be used when they will meet agency requirements — unless agencies obtain an exception from GSA. Mandatory-for-use programs include:

- FTS2000 network
 - Consolidated local telecommunications service
 - National security and emergency preparedness (NSEP)
 - Financial Management Systems Software (FMSS) Multiple Awards Schedule (MAS) Contracts program
-

(continued on next page)

26.3 Required Alternatives to Consider in the Analysis of Alternatives *(continued)*

Mandatory-for-consideration Programs

FIRMR 201-24.2 identifies GSA’s mandatory-for-consideration programs. These sources should be used when they will meet agency requirements *and their use is the most advantageous alternative*. Mandatory-for-consideration programs include:

- Federal Software Exchange Program
 - Excess FIP Equipment
 - Federal Secure Telephone Service (FSTS)
 - Information systems security (INFOSEC)
-

Additional Information

These mandatory-for-use and mandatory-for-consideration programs are discussed in detail elsewhere in this text. You should check the FIRMR and FIRMR Bulletins for information on these programs and contracts. Refer to the references section of this chapter on page 26-4 for further information.

26.4 Other Alternatives to Consider in the Analysis of Alternatives

Nonmandatory Programs

In addition to the mandatory-for-use and mandatory-for-consideration programs, there are also certain NONMANDATORY programs and contracts that you may consider. These include:

- GSA Nonmandatory Multiple Award Schedule (MAS) Contracts:
 - Telecommunications Group 58: telephone, facsimile, public address, video teleconferencing, telephone answering equipment, non-tactical radio, tone and voice paging, and radio navigation equipment. (202) 501-1061
 - General Purpose ADP Group 70: mainframe, mini, and end-user computers, including optical systems, peripheral equipment and software packages. (202) 501-1993
- GSA Office of Technical Assistance *cost-reimbursable* programs:
 - Federal Information Systems Support Program: ADP support services including systems analysis and programming, computer operations, computer security and related services through consolidated contracting, project management and administration. (703) 756-4227
 - Federal System Management Center: technical assistance in the management and operation of information technology centers including cost recovery, capacity management, security and data center reviews. (703) 756-4111
 - Federal Systems Acquisition Support Center: technical and contractual assistance in all areas related to the acquisition of information resources. (703) 756-4201
 - Federal Software Management Support Center: software conversion, software renewal, and the development of automated software engineering tools and technology (703) 756-4500
- GSA's Telecommunications Technical Service Contract: system analysis, system design, technical specifications, systematic testing and relocation for voice data systems. (202) 501-3881.

All these programs establish contracts from which agencies can order goods and services.

(continued on next page)

26.4 Other Alternatives to Consider in the Analysis of Alternatives

(continued)

Existing Contractual Sources

There are other contracts already “in place” and approved for multi-agency ordering. These contracts can save a great deal of time and effort in acquiring FIP resources. These are specialized contracts referred to as “Governmentwide agency contracts.” They are described in FIRMR Bulletin C-24. Examples include:

- *Air Force Standard Multiuser Small Computer Requirements Contract (also known as AFCAC 251)*, for small computer systems (TEMPEST and non-TEMPEST) and related maintenance, training, systems analysis, engineering support, software, and telephone assistance.
- *Joint Service Standard Lapheld II Contract*, available through the Department of the Navy for notebook computer systems, including maintenance and training.
- *Electronic Data Interchange (EDI) Network Services*, a no fee service available through GSA for network services between vendors, bidders and clients. (This service is expected to grow in importance as electronic commerce and EDI replace paper-based contracting, especially for small purchases.)
- *International Switched Voice Service (ISVS)*, available through the Department of Defense, for international voice and data transmission for all Federal agencies from the U.S. mainland to specified international locations.

You should check with GSA on (202) 501-1126 to obtain the latest information on Governmentwide agency contracts (GWACs). Or you can use GSA’s Bulletin Board Service on (202) 208-7484 (300 to 9600 baud, 8 data bits, no parity, and 1 stop bit).

Open Market

If your agency’s need cannot be met by existing programs or contracts, reassignment, reuse, or sharing, then you should consider open-market contracting. You would do this in cooperation with program and technical staff.

There are many options for open market contracting, including:

- Small purchases
- Small and disadvantaged business set-asides
- Other contracting.

For further information about locating open market sources, see Chapter 16, *Market Research for Acquisition of FIP Resources*.

26.5 Content of the Analysis of Alternatives

Mandatory Requirements

The FIRMR dictates that an analysis of alternatives consider certain acquisition alternatives. As you learned earlier, they are:

- GSA’s mandatory-for-use programs
- GSA’s mandatory-for-consideration programs
- Reassignment or reutilization
- Sharing
- Contracting

Your agency must consider these alternatives, to the extent that they apply to the acquisition. For example, if you are acquiring technical support services, you would not need to consider reassigning or reusing equipment. Similarly, if you are buying microcomputers, you need not consider GSA’s mandatory-for-use program, FTS2000.

Finally, agencies must consider the costs, risk, and magnitude of conversion from installed FIP resources to augmentation or replacement resources.

Nonmandatory Requirements: Organization and Content

The FIRMR does not dictate how an analysis of alternatives should be organized or suggest content beyond the “considerations” discussed above. However, the following are typical:

- Overview
 - Assumptions and constraints
 - Methodology
 - Results of market survey and sources sought
 - Description of technical alternatives and acquisition alternatives, with risks and effects for each
 - Ranking of alternatives
 - Costs and benefits (either included with the analysis of alternatives or as a separate document)
 - Justification for selected alternative
-

26.5 Content of the Analysis of Alternatives *(continued)*

Size of the
Analysis of
Alternatives

FIRMR 201-20.202

FIRMR 201-20.202 requires agencies to conduct an analysis of alternatives *commensurate with the size and complexity of the need*. So the content of the alternatives analysis varies according to the size and complexity of the FIP resource acquisition.

If the acquisition is large and complex, the analysis of alternatives may be very extensive and involve many people. It may even be “contracted out” to a private sector firm specializing in analyzing alternatives, costs, and benefits. The result may be a large and complex document produced over a period of several months or more.

On the other hand, if the FIP resource acquisition is fairly simple and straightforward, the alternatives analysis may be a much smaller document produced with one or more days of work “in house” by technical personnel from the requiring agency.

So you must understand that the analysis of alternatives must fit the procurement in terms of depth, complexity, length, and content.

Other
Considerations

GSA’s popular acquisition guides include special considerations for the alternatives analysis *by type of resource*. For example, if you are buying systems integration services, GSA discusses issues such as choosing among architectural options and deciding about off-the-shelf versus custom system development. If you are buying maintenance services, GSA’s guidance discusses common industry maintenance practices, including ways of delivering maintenance service. And if you are buying FIP support services, GSA advises on areas such as restrictions on key personnel and defining technical scope.

These guides, which follow a standardized outline, normally address analysis of alternatives in Chapter 6. So if you are participating in or reviewing an alternatives analysis, you should refer to these guides. Available on GSA’s CD-ROM or through its IRM Reference Center, they now include:

- *A Guide for Acquiring Maintenance Services*
- *A Guide for Acquiring Commercial Software*
- *A Guide for Acquiring Systems Integration Services*
- *A Guide for Acquiring Federal Information Processing Support Services*

26.6 Areas Unique to Software

Factors Unique to Software

There are some factors unique to software that must be addressed in a requirements analysis and in an analysis of alternatives.

As a rule, software, especially commercial software, is changed, modified and improved more often than the hardware on which it runs. It is not unusual for three or four upgrades or generations of software to be released in a five year period. Often, this software is not compatible with software from other authors, even if it does the same things. For example, some word processing programs from different producers are not readily compatible, even if they include conversion features.

Also, software vendors generally do not wish to sell software, preferring instead to “license” it to the users, including the Government.

This means that when a software requirement arises, you can be fairly sure that:

1. That version of software will be obsolete or outdated in a few years; and
2. It will probably not be readily compatible with other software applications that perform the same tasks; and
3. The author or vendor will probably prefer a licensing agreement rather than an outright sale, especially if that software is commercially available.

Therefore, there is generally less competition in a software acquisition, especially for commercial software, than in most types of FIP resources acquisitions.

Since these factors are unique to software, they can create a higher degree of risk in the acquisition. This leads to certain special considerations when software is involved, specifically:

- Conversion studies
 - Licensing restrictions
 - Customization
-

26.6 Areas Unique to Software *(continued)*

Conversion Study	<p>The first unique area you should understand about software is the requirement for a <i>conversion study</i>. The risk of acquiring noncompatible software, or software that will not operate acceptably, may be very high. Often, too, there are significant hidden costs of acquiring noncompatible software that arises from the need to retrain staff and from lost efficiency while users become adept with the new software.</p> <p>Agencies use software conversion studies and benefit-cost analyses to document the software applications programs or data to be converted and describe costs. For large buys, these are typically separate documents. For extremely small buys, such as purchase of a small number of copies of off-the-shelf software, a single document is sometimes used to describe and justify the requirement. (For more information, see Chapter 25, <i>Determining if Conversion Studies are Necessary</i>, Chapter 28, <i>Benefit-Cost Analysis and Present Value Discounting</i>, and Chapter 12, <i>Acquiring Commercial Software</i>.)</p>
Licensing Restrictions	<p>A second area unique to the software analysis of alternatives concerns <i>licensing restrictions</i>. Software is often licensed, rather than purchased outright. There may be licensing restrictions that affect how freely you can transfer software among Government agencies. If such restrictions exist, then you must include in the analysis of alternatives a consideration of what effect licensing restrictions may have.</p> <p>Note that one of your negotiation goals may be to obtain software licenses and warranties with the least restrictions and greatest flexibility for use by the Government.</p>
Customization	<p>A third area unique to software concerns <i>customization</i>. In some acquisitions, there may be no software that exactly meets the technical requirements, and some customization will be required. The cost and effort of software customization will add to acquisition cost and must be included in both the requirements analysis and in the analysis of alternatives. If there is a requirement for customization, this should be discovered in the requirements analysis or conversion study.</p>
For Further Information	<p>To learn more, refer to Chapter 12, “Acquiring Software,” and the GSA’s <i>A Guide for Acquiring Commercial Software</i>.</p>

26.7 How the Analysis of Alternatives Generates Improvements in the Specification

Using the Analysis
of Alternatives to
Improve
Specifications

If the initial specifications for a FIP resource acquisition are developed during the requirements analysis, later developments in acquisition planning may affect those specifications. During the analysis of alternatives, you may see that the specifications should be updated or improved, because something important was overlooked.

For example, some specifications are selected because they are already “familiar” to the technical personnel. However, these older specifications may be outdated, because they do not account for the new, improved capabilities available with current technology. During the analysis of alternatives it may become apparent that the specifications should be returned to the technical experts and revised to account for improvements in technology. If this happens, do not hesitate to recommend updating the specifications, or you may risk releasing obsolete specifications.

Also, both requirements and technology change over time. It is possible that nearly a year may pass between the time the specifications are first developed and the time when the analysis of alternatives occurs. This may require changing the specifications.

26.8 Summary: Determining Best Source(s)

Checklist for Determining the Best Source(s)

To conduct your determination in a systematic manner and minimize the chance of a mistake, you can take the following steps:

- _____ 1. Determine FIRMR applicability
 - _____ 2. Consider use of active inventory
 - _____ 3. Consider reutilization
 - _____ 4. Consider mandatory-for-use programs
 - _____ 5. Consider mandatory-for-consideration sources
 - _____ 6. Consider GSA nonmandatory FIP schedules
 - _____ 7. Consider open market sources
 - _____ 8. Evaluate costs and benefits
-

Summary: Determining Best Source(s)	
<p>Step 1 Determine FIRMR Applicability</p>	<p>If you have not yet done so, determine if the FIRMR applies. If the proposed acquisition is not governed by the FIRMR, follow the FAR. To determine whether the FIRMR applies, refer to FIRMR Bulletin A-1 (FIRMR applicability) and follow the guidance provided in Chapter 15 of this text.</p>
<p>Step 2 Use Active Inventory</p>	<p>The next step is to determine whether the requirement can be met by redistributing FIP assets. You should always consider using the active inventory in your analysis of alternatives.</p> <p>Reassignment: FIP resources not yet declared excess to your agency may be available for reassignment.</p> <p>Sharing. Many Federal agencies operate computer systems and other FIP resources that are not used to full capacity. Often, these existing resources can meet the requirement without the added cost of new acquisitions. First consider all resources available for sharing within the agency, then broadly consider FIP resources that may be available in other agencies.</p> <p>For example, the active inventory of FIP resources contains many mainframe computers throughout the country that are not being used to full capacity. Access to these mainframe computers is sometimes available through a “sharing” program established by GSA. In some cases, sharing is the most advantageous alternative.</p> <p>In accordance with the Paperwork Reduction Act (44 U.S.C. 3501), FIRMR 201-2.001 requires information resource managers to implement policies for sharing information technology (FIP resources). FIRMR Bulletin C-11 provides guidance on sharing. OMB Circular A-130, <i>Management of Federal Information Resources</i>, discusses procedures for cost accounting and recovery for shared resources.</p>
<p>Step 3 Consider Reutilization</p> <div> <p>DoD Ref. 7950.1-M, Property Reutilization</p> </div>	<p>You should next consider whether the FIP resource requirement can be met by using excess FIP resources — meaning resources not maintained in an agency’s active inventory but not yet determined surplus to the Government. Remember that agencies must report to GSA any excess equipment above \$1 million original acquisition cost. (DoD must report all FIP assets in excess of \$100,000.)</p> <p>FAR 8.1 requires agencies to consider the use of excess as a first source of supply. FIRMR 201-23 explains the procedures to follow in disposition of FIP hardware and software. FIRMR Bulletins C-2, C-27, and C-30 address reutilization.</p>

(Procedure continued on next page)

Summary: Determining Best Source(s) <i>(continued)</i>	
<p>Step 4 Consider Mandatory-for-Use Programs</p>	<p>If the FIRMR applies, you must consider GSA's mandatory-for-use programs. Most of these programs provide telecommunications resources or services.</p> <p>Definition: A mandatory-for-use program is mandatory unless a GSA exception has been granted.</p> <p>Sources Mandatory for Use:</p> <p>FTS2000. The FIRMR specifies that agencies MUST use the FTS2000 network for procurements subject to Section 111 of the Federal Property and Administrative Services Act (40 U.S.C. 759). GSA negotiated the FTS2000 contracts to acquire a nationwide, long distance telecommunications network (and related services) to meet needs across Government.</p> <p>FIRMR Bulletin C-18, <i>Federal Telecommunications System 2000 (FTS2000)</i>, provides information on FTS2000 contract services.</p> <p>Consolidated local telecommunications service. This mandatory-for-use service offered by GSA provides local telecommunications services in most buildings occupied by concentrations of federal employees. It includes major switches and switching service, universal features and applications, and wire and cable to designated points of connection. FIRMR Bulletin C-15 describes consolidated local telecommunications service, including how to order and how to obtain a current listing of service locations.</p> <p>National Security and Emergency Preparedness (NSEP). FIRMR 201-24.106 requires agencies to use available GSA telecommunications systems and services to meet their NSEP requirements for telecommunications. FIRMR Bulletin C-20 provides details.</p> <p>Financial Management Systems Software (FMSS) Multiple Awards Schedule (MAS) Contracts Program. FIRMR 201-24.107 requires agencies to acquire commercial software for primary accounting systems and related implementation services and support from the FMSS MAS program. (See FIRMR Subpart 201-39.8 for policies and procedures on using the FMSS MAS contracts program.) <i>This is GSA's only mandatory MAS program.</i></p>
FIRMR 201-24.001	
FIRMR 201-24.101	
FIRMR 201-24.102	
FIRMR 201-24.106	
FIRMR 201-24.107	

(Procedure continued on next page)

Summary: Determining Best Source(s) <i>(continued)</i>	
<p>Step 5 Consider Mandatory-for- Consideration Sources</p> <p>FIRMR 24.001(b)</p> <p>FIRMR 201-24.201</p> <p>FIRMR 201-24.202</p> <p>FIRMR 201-24.203</p>	<p>If the FIRMR applies, you must also consider GSA’s mandatory-for-consideration programs. This means that these sources must be considered in acquisition planning — and used if agency requirements can be met by these programs and if using them is the most advantageous alternative to the Government. (FIRMR 201-20.203-1(a)(3)).</p> <p>Definition: A mandatory-for-consideration source is one used when it satisfies the requirement AND is the most advantageous alternative.</p> <p>Sources Mandatory for Consideration:</p> <p>Federal Software Exchange Program (FSEP). FIRMR 201-24.201 describes the Federal Software Exchange Program, administered by the National Technical Information Service of the Department of Commerce under an interagency agreement with GSA. It promotes the sharing of common-use software and related documentation. See FIRMR Bulletin C-12 for additional information on FSEP.</p> <p>Excess FIP Equipment. FIRMR 201-24.202 describes the Excess FIP Equipment Program, a mandatory-for-consideration program that facilitates the reuse of excess FIP equipment components that are not outdated and that have an original acquisition cost of \$1 million or more. See FIRMR 201-23 and FIRMR Bulletin C-2 and C-30 for procedures for disposition and reuse of excess FIP equipment.</p> <p>Telecommunications Assistance Programs. FIRMR 201-24.203 describes the GSA’s mandatory-for-consideration telecommunications assistance programs and services. They include the Federal Secure Telephone Service (FSTS), for transmission of sensitive or classified voice information, and Information Systems Security (INFOSEC), for installation, maintenance, key distribution, design, engineering, and related consulting. GSA provides guidance on both programs in FIRMR Bulletin C-19.</p>

(Procedure continued on next page)

Summary: Determining Best Source(s) <i>(continued)</i>	
<p>Step 6 Consider Nonmandatory Schedules</p>	<p>Next you should consider GSA nonmandatory schedules.</p> <p>Applicability. Federal agencies may order FIP resources from the GSA Schedules and avoid the expense of open market contracting.</p> <p>GSA Nonmandatory Multiple Award FIP Schedule (MAS) Contracts GSA establishes nonmandatory schedules to provide a cost-effective way of obtaining widely needed, commercial FIP resources—both telecommunications and general purpose ADP resources. Prices established on the nonmandatory schedules are considered to be the best prices that the vendors would offer to their most favored customers. In addition, using schedules is inexpensive compared with open market contracting. Chapter 47 provides details on nonmandatory schedule usage.</p> <p>These nonmandatory schedules are especially useful in non-metropolitan areas where there are not significant numbers of FIP resource vendors available. Remember that these schedules for ADP and telecommunications resources are NONMANDATORY. (Only the FMSS MAS contracts for financial software described in Step 4 are mandatory.)</p>
<p>Step 7 Consider Open Market Sources</p>	<p>Finally, if none of the previous steps leads to acceptable sources, you should consider acquisition in the open market. Open market options include small purchases, small and small disadvantaged business set-asides, and other contracting.</p> <p>(For a more detailed discussion of market sources, see Chapter 16, “Market Research for Acquisition of FIP Resources.”)</p>
<p>Step 8 Evaluate Costs and Benefits</p>	<p>Once your agency has determined acceptable alternatives to meet its needs, the costs and benefits of those alternatives must be analyzed and compared. You will learn about this in Chapter 28.</p>

SUMMARY

In this chapter, you learned about the purpose and content of an analysis of alternatives and its relationship to the requirements analysis and the overall acquisition process. In the next chapter, you will learn about reviewing an analysis of alternatives.

CHAPTER 27

REVIEWING AN ANALYSIS OF ALTERNATIVES

Chapter Vignette

“If the analysis of alternatives largely determines how and from what sources we will solicit offers,” said Mark, “does that mean it affects the competitiveness of the procurement?”

“It sure does,” answered Marcia, “which explains why it’s important for you to be able to review the document. Remember—a good analysis of alternatives is thorough, considers all viable alternatives, and analyzes the advantages and disadvantages of each alternative, including the tradeoffs between costs and benefits and level of risk associated with each alternative. Also, the analysis of alternatives must avoid eliminating without justification an alternative, such as sharing or using an existing contract, that might meet the Government’s requirements.”

Course Learning Objectives

At the end of this chapter, you will be able to:

Overall:

Review and critique an analysis of alternatives.

Individual:

- 27.1 Demonstrate how to recognize an analysis of alternatives.
- 27.2 Explain the key factors required for a successful analysis of alternatives.
- 27.3 Explain the analytical process required to critique an analysis of alternatives.
- 27.4 Review an analysis of alternatives.

Chapter Overview

Scope

This chapter explains how to critique an analysis of alternatives. Examples of language from analyses of alternatives are provided for your consideration. This chapter emphasizes:

- Reviewing for inclusion of mandatory and nonmandatory requirements;
 - Determining the effect on competition,
 - Identifying and assessing risk, and
 - Evaluating and selecting of the most advantageous alternative.
-

References

In order to understand and perform the tasks discussed in this chapter, you may need to refer to regulatory and guidance documents. Chapters 26 and 28 contain complete lists.

Topics in This Chapter

The major topics in this chapter are:

SECTION	TITLE	PAGE
27.1	How to Recognize an Analysis of Alternatives	27-4
27.2	Key Factors for a Successful Analysis of Alternatives	27-6
27.3	Overview of the Analytical Process: Critiquing the Analysis of Alternatives	27-8
27.4	How to Review an Analysis of Alternatives	27-11

27.1 How to Recognize an Analysis of Alternatives

Introduction

An analysis of alternatives helps determine *how and from what potential sources the Government will acquire needed goods or services*. It determines:

- What alternatives are available to meet the need?
- Which alternative is the most advantageous?

For large acquisitions, these two questions are often answered with two separate documents: alternatives analysis and benefit-cost analysis. For smaller acquisitions, both questions may be answered by a single document. Nonetheless, *the single element that alternatives analyses have in common is a listing of possible alternatives to meet a need*.

Sample Organization and Content

The FIRMR does not dictate how an analysis of alternatives should be organized. The alternatives analyses you review in this chapter address some or all of the following:

- Overview
 - Assumptions and constraints
 - Methodology
 - Results of market survey and sources sought
 - Description of technical and acquisition alternatives, with risks and effects for each
 - Ranking of alternatives
 - Costs and benefits (either included with the analysis of alternatives or as a separate document)
 - Justification for selected alternative
-

(continued on next page)

27.1 How to Recognize an Analysis of Alternatives *(continued)*

Size of the Analysis of Alternatives

FIRMR 201-20.202

As you learned in Chapter 26, the FIRMR requires agencies to conduct an analysis of alternatives *commensurate with the size and complexity of the need*.

If the acquisition is large and complex, an analysis of alternatives may be over a hundred pages and involve many people over many months. On the other hand, if the FIP resources acquisition is fairly simple and low-cost, the alternatives analysis may be only a page or two prepared and approved in less than a week by technical and program personnel.

Keep in mind that the analysis of alternatives must fit the acquisition and be commensurate with the size and complexity of the requirement.

Types of Alternatives

As you know, an analysis of alternatives addresses two broad categories of alternatives: technical and acquisition. See the following table.

ALTERNATIVES: TECHNICAL AND ACQUISITION
<ul style="list-style-type: none"> • <i>The analysis of technical alternatives or technical solutions</i> is completed by technical specialists who understand all the technical requirements. The purpose of this part of the analysis of alternatives is to examine all the technical alternatives and identify the technical advantages and disadvantages of each alternative, including any special risks.
<ul style="list-style-type: none"> • <i>The analysis of acquisition alternatives</i> is normally completed by contracting and technical personnel. The purpose of this part of the analysis of alternatives is to evaluate the acquisition (potential source) alternatives and options.

Although the format of the analysis of alternatives may vary among agencies—or even among acquisitions in the same agency—you should be able to recognize an analysis of alternatives because it identifies technical and acquisition alternatives.

Remember: An alternatives analysis can take many forms. It may take the form of a one-page justification attached to a requisition or a several hundred page document formally entitled “Analysis of Alternatives.” It may be called an alternatives analysis, analysis of alternatives, statement of alternatives, or options determination. The only common element among such documents may be your determination that *the document describes alternatives*.

27.2 Key Factors for a Successful Analysis of Alternatives

Key Factors for Successful Analysis of Alternatives

Even *before you get started* on the step-by-step procedure for analyzing an analysis of alternatives, you should understand six key factors that are necessary for success. They are:

- Establishing realistic assumptions and unrestrictive constraints,
- Identifying a broad range of viable alternatives,
- Devoting sufficient resources to the project,
- Justifying and documenting the rationale for selection of the most advantageous alternative,
- Documenting costs and benefits that will serve as performance goals, and
- Reassessing alternatives periodically throughout the process.

These factors are addressed in the following table.

Key Factors for Successful Analysis of Alternatives	
1.	<p><i>Establish realistic assumptions and unrestrictive constraints.</i> Remember, EVERY requirement is based on some assumptions and some constraints.</p> <p>An assumption is an informed guess about the future. If assumptions are NOT reasonable, the agency may NOT acquire resources that meet its needs. For example, if an agency seriously understates its current or future workload, it may buy too small a computer to meet its needs.</p> <p>A <i>constraint</i> is a limitation or restriction that applies to the acquisition. Common constraints include cost, time, technical limits, organizational, and political constraints. <i>If constraints limit competition</i>—such as the constraint requiring compatibility—<i>then the constraint must be justified.</i></p>
2.	<p><i>Identify a broad range of alternatives.</i> The purpose of an alternatives analysis is to identify <i>first</i> a broad range of technical and acquisition alternatives and <i>next</i> identify the most advantageous alternative (considering costs and benefits) out of alternatives that meet the agency needs. You must be aware that sometimes technical personnel use an alternatives analysis to eliminate from serious consideration all but the favored technical alternative.</p>

(Table continued on next page)

27.2 Key Factors for a Successful Analysis of Alternatives *(continued)*

Key Factors for
Successful
Analysis of
Alternatives
(continued)

3.	<i>Devote the appropriate level of effort to the analysis of alternatives.</i> If the FIP resource acquisition is large, your agency should devote a significant amount of personnel, time and energy to the development of an analysis of alternatives. If this has not been done, the risk of acquisition of failure is greater.
4.	<i>Justify and document the rationale for selection of the most advantageous alternative.</i> Selection of the most advantageous alternative must consider cost and must NOT rely on unduly restrictive (unjustified) requirements or constraints. <i>Selections that choose an alternative without a cost comparison may be overly restrictive.</i>
5.	<i>Document costs and benefits to serve as performance goals.</i> Every acquisition should have goals so that the agency can later decide if the acquisition was successful. (GSA now asks for this performance information when agencies request Delegations of Procurement Authority for major acquisitions.) The best way to set goals is to base them on measurable objectives, projected costs and benefits of the most advantageous alternative. By documenting its projections, program and contracting personnel can measure whether the system cost was within agency estimates. Projections should also identify benefits to be derived by the system.
6.	<i>Reassess alternatives periodically.</i> Keep an eye on the market. Firms constantly develop and release new technologies or new capabilities. Remember, a complex FIP resource acquisition can take up to two years or more from start to finish. Much can happen during that time which could affect whether a selected alternative remains the most advantageous.

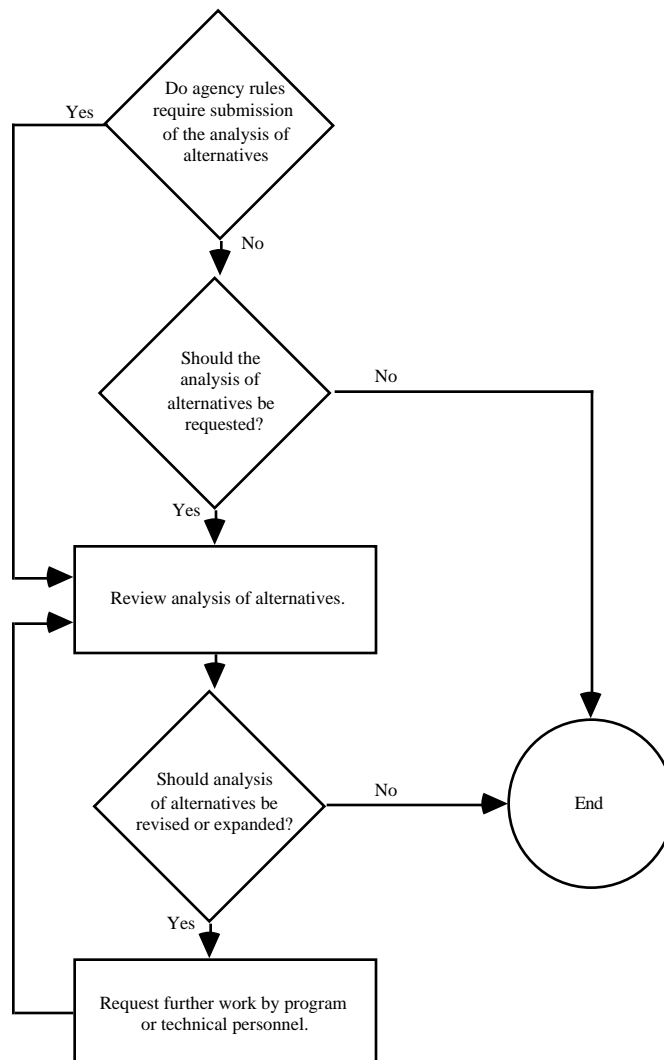
27.3 Overview of the Analytical Process: Critiquing the Analysis of Alternatives

Analytical Process

The process of critiquing an analysis of alternatives involves three primary stages:

- Determine if there are any agency-unique requirements to be considered in an analysis of alternatives.
- Determine if the analysis of alternatives has been or should be submitted.
- Review the alternatives analysis and advise the requiring activity if it should be revised or expanded.

The flow chart below illustrates the decision process.



27.3 Overview of the Analytical Process: Critiquing the Analysis of Alternatives *(continued)*

Determining Agency-Unique Requirements

Federal agencies often have their own rules about what must be included in procurement-related studies. *Such agency-unique rules are in addition to those established by the FIRMR.*

For example, one agency specifically requires its activities to consider using its centralized ADP center to meet agency requirements.

You should review agency policies and procedures to determine if there is a specific format or content for an analysis of alternatives. Keep in mind that this chapter addresses the FIRMR requirements and some other suggested considerations; you must add your agency's rules to the questions and notes in this chapter.

Determining Submission Requirements

In addition to rules about the content of an alternatives analysis, your agency may specify procedures for submission, review, approval, and dissemination.

Some agencies require, for acquisitions above a certain threshold, that a copy of an analysis of alternatives be provided to the IRM and contracting offices. Others require that activities certify that an alternatives analysis has been completed and provide the date of approval. Some agencies have no internal requirements at all.

Your agency may have specific requirements for submission, approval, and dissemination of the alternatives analysis.

27.3 Overview of the Analytical Process: Critiquing the Analysis of Alternatives *(continued)*

Special Requests for Submission

Even if your agency does not require by policy or procedure submission of an alternatives analysis, the contracting officer normally has sufficient authority to request a copy. When would this be wise?

As with the requirements analysis, contracting offices should consider requesting a copy of the alternatives analysis for review when a program or an acquisition:

- Does not make sense,
- Is critical to the agency's mission,
- Involves expenditure of large sums over the system's life,
- Is unusually restrictive of competition,
- Is of compelling interest to private firms, or
- Has a history of protests.

Keep in mind: If a contracting office requests a copy, the contracting office is essentially obligated to review it.

27.4 How to Review an Analysis of Alternatives

Reviewing an Analysis of Alternatives

You cannot always rely on the requiring activity or technical staff to conduct thorough studies without some guidance. Sometimes requirements personnel will do an excellent job defining the technical alternatives but will overlook FIRMR requirements to address acquisition alternatives.

Therefore, when you receive an analysis of alternatives—whether as part of a standard purchase request, after special request by the contracting office, or as a result of participation on an agency acquisition team—*it is your responsibility to review the document.*

Understanding the Analytical Process

As you learned in Chapter 24, analysis means the methodical application of independent thought to a problem or process, its elements, their relationships, and consequences. *Inherent in the nature of analysis is a lack of comprehensive and set rules that dictate decisions.*

Analyzing an analysis of alternatives requires first that you review it against the FIRMR requirements *and* your agency's requirements. You also review the analysis of alternatives to determine if it appears to consider a broad range of alternatives to meet the need. And you also need to consider whether the analysis of alternatives has the effect of unduly restricting competition.

You must understand how broad your analysis can be so that you can exercise independent thought and judgment. *Although this chapter provides suggested questions, it is imperative for you to understand that they are an aid to—not a replacement of—your analysis.*

Review for Overall Content

Before getting into the details of an analysis of alternatives, you should complete a quick review of the overall document content. You first want to understand how the document is organized. This will aid you in making a preliminary assessment of how complete the analysis of alternatives is when you review one prepared by your activity.

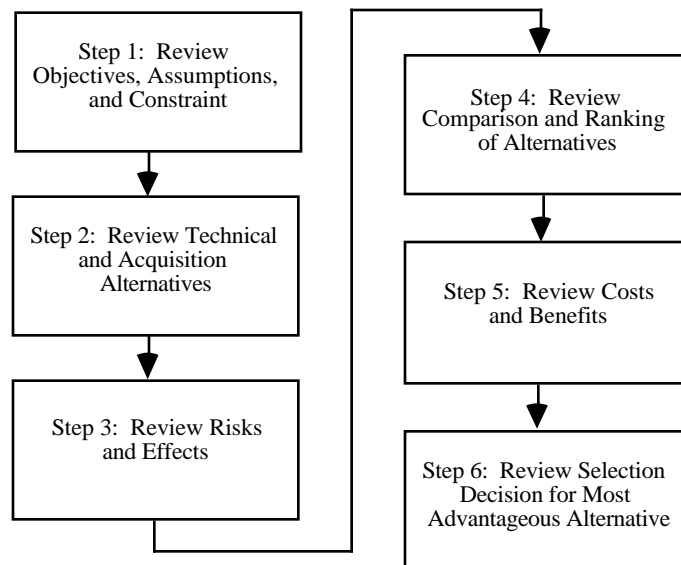
27.4 How to Review an Analysis of Alternatives *(continued)*

Review for Detail

After you have a preliminary assessment of what is included, you need to review the analysis of alternatives in detail. In all you read, you should consider:

- Do I understand the alternatives the requiring activity considered?
- Were any logical alternatives or sources apparently not considered?
- Is the basis for selecting the most advantageous alternative clear and compelling?
- Is the information clear, complete, and convincing?

The following flowchart and sections of this chapter address in more detail the steps involved in reviewing an analysis of alternatives.



Remember that to perform the last two steps you may need to refer to your benefit-cost analysis.

(continued on next page)

27.4 How to Review an Analysis of Alternatives *(continued)*

Step 1: Review Objectives, Assumptions, and Constraints

All acquisitions should have clearly stated objectives. If you do not see objectives or goals in the analysis of alternatives, check the requirements analysis. Objectives are important because the purpose of an analysis of alternatives is to identify alternatives that meet the agency's needs and objectives.

You should also review all assumptions to make sure they are clear and reasonable. Imagine that you are buying servers (computers) for a local area network and your review of the analysis of alternatives reveals an assumption that there will be no growth in workload over the systems life. This assumption does not sound reasonable because most automation projected is conducted to reduce personnel and/or increase productivity. To increase productivity requires growth in capacity. Therefore, you should question the requiring activity.

You should look carefully at the constraints because these often limit competition, sometimes without justification. For example, a constraint limiting an acquisition to compatible resources should be backed up by a justification and, in some instances, a conversion study. What about constraints that call for award of "lots" to a single contractor or a requirement for "only new" resources? These constraints limit competition and must be justified (according to the FIRMR) in terms of how the minimum needs are to be met through utilization of these constraints.

Step 2: Review Technical and Acquisition Alternatives

As you learned in Chapter 26, there are three major stages involved in identifying alternatives:

- Surveying the market
- Identifying technical solutions
- Identifying acquisition (potential source) solutions

Your review of an analysis of alternatives considers all three stages. You should also determine whether nonmandatory programs or contracts were considered or may offer the most advantageous alternative.

(Topic continued on next page)

27.4 How to Review an Analysis of Alternatives *(continued)*

Step 2: Review
Technical and
Acquisition
Alternatives
(continued)

Market survey and technical solutions. Your primary interest in this area is to determine whether the market survey is thorough and reveals the full range of technical solutions available in the market. Remember, the *initial* objective is to identify a broad range of alternatives—not just one alternative—that will fulfill a requirement.

For example, in a market survey for commercial software, you determine whether the survey fairly considered a broad range of available software or only considered one or two best known or most popular alternatives. This is important, because there may be a great difference in price and functionality between software packages.

Make sure that the analysis is fair and does not jump to any unsupported conclusions. This sometimes happens when one solution seems to stand out from all the others. Remember: If the analysis of technical alternatives clearly overlooks one technical option or does not sufficiently analyze that option, you should question it.

Be careful here. Jumping to an unsupported technical conclusion without fairly examining other technical alternatives limits competition and can be a cause for a later protest.

Keep in mind that technical alternatives discussed in the analysis depend on the nature of the planned acquisition.

(Topic continued on next page)

27.4 How to Review an Analysis of Alternatives *(continued)*

Step 2: Review Technical and Acquisition Alternatives (continued)

Acquisition solutions. Your primary interest in this area is to be sure that a requiring activity has considered alternatives required by the FIRMR. You should recall that they are:

- Using GSA’s mandatory-for-use programs when they will meet agency requirements,
- Using GSA’s mandatory-for-consideration programs when they will meet requirements *and* their use is the most advantageous alternative,
- Reassigning or reutilizing FIP resources no longer needed for other purposes in the agency or other agencies,
- Sharing FIP resources, and
- Acquiring resources by contracting, including small purchase and small and disadvantaged business set-asides.

Mandatory-for-Use	Mandatory-for-Consideration
<ul style="list-style-type: none"> • FTS2000 network • Federal Software Exchange Program • Federal Secure Telephone Service (FSTS) • Financial Management Systems Software (FMSS) Multiple Awards Schedule (MAS) Contracts program 	<ul style="list-style-type: none"> • Excess FIP Equipment • Consolidated local telecommunications service • National security and emergency preparedness (NSEP) • Information systems security (INFOSEC)

As you learned in Chapter 26, the FIRMR’s “mandatory” requirements are only *mandatory to the extent that they apply to your acquisition*. For example, the requirement to consider FTS2000 applies *if* your acquisition involves in whole or part intercity telecommunications needs.

(Topic continued on next page)

27.4 How to Review an Analysis of Alternatives *(continued)*

Step 2: Review Technical and Acquisition Alternatives (continued)

Nonmandatory Programs and Existing Contracts. As you learned in Chapter 26, GSA makes available to Federal agencies a broad range of nonmandatory programs and contracts. These can often serve as cost-effective solutions for meeting requirements. You should be aware that *frequently technical personnel are unaware of these alternatives*. You should determine if any of these alternatives might meet the need but were overlooked.

If you need to review these nonmandatory and mandatory requirements, refer to Chapter 26. You may especially want to review the table on page 26-10 for a listing of representative technical and acquisition alternatives.

Step 3: Review Risks and Effects

The analysis of alternatives should consider the risks and effects for each feasible alternative. Your review should determine that:

- agency risks have been assessed,
- risks seem appropriate, and
- risks do not unduly restrict competition.

Identification of risk is a primary way that the top two or three alternatives are identified for further detailed technical and cost analysis. Remember that the agency may have initially identified four, six, or even ten feasible alternatives. But it is too expensive to develop costs and benefits for so many alternatives. So the two or three alternatives most likely to meet the needs and objectives with minimal risk are selected for benefit-cost analysis.

Risks or effects may relate to program, equipment, software, information, organizational, operational, developmental, space and facility, or cost impacts. The table below shows examples of the types of factors you may encounter in an analysis of alternatives, with examples of how they might be addressed.

(Topic continued on next page)

27.4 How to Review an Analysis of Alternatives *(continued)*

Step 3: Review Risks and Effects (continued)

Factor	Risk or Effect	Example
<i>Obsolescence</i>	Resources that become out-of-date over the systems life	"This alternative (with evaluated upgrade options) will meet agency requirements for a minimum of seven years."
<i>Availability</i>	Loss of resources due to scheduled maintenance or downtime	"This alternative will provide an availability rate of at least 95% for all planned users."
<i>Reliability</i>	Loss of resources due to corrective maintenance	"This alternative offers the best reliability record and should not require corrective maintenance more than one hour for each 1,000 hours of operation."
<i>Maintainability</i>	Ease and speed of repairing or replacing defective or failed system components	"This alternative requires the most difficult and time-consuming maintenance support: it requires at least two full time service personnel, along with on-site stockage of 37 line items of repair parts."
<i>Expandability</i>	Ease and ability of expanding to meet anticipated growth	"This alternative offers the greatest expandability with the least effort: it is the only alternative that makes full use of existing capacity and requires no training."
<i>Flexibility</i>	Ease of accommodating workload changes	"This alternative offers the least flexibility. The system design allows operation at only four sites simultaneously. Access to additional sites cannot be achieved without shutting down computer access to initial operating sites."
<i>Security</i>	Measures to prevent unauthorized access, tampering, or destruction	"This alternative offers a lesser defense against unauthorized access because it can be accessed from non-Government sites."
<i>Privacy</i>	Measures to protect personnel data or other sensitive personal information	"This alternative does not support compliance with provisions of the Privacy Act, because it might permit unauthorized access to employee personnel data."

(Table continued on next page)

27.4 How to Review an Analysis of Alternatives *(continued)*

Step 3: Review Risks and Effects (continued)

Factor	Risk or Effect	Example
<i>Personnel</i>	Effect on support personnel including training or skill improvements	“This alternative is the only one that makes use of object-oriented programming: it will support superior productivity and require the least retraining.”
<i>User Acceptance</i>	Effect on the user community, especially the effect of new methods and procedures on established routines	“The imaging technology option is the only alternative that will simplify document flow procedures, since all departments would be able to retrieve documents on demand through computer imaging technology, rather than requesting a paper (hard copy) version through channels. Our survey indicates this will have a very favorable impact on user acceptance.”
<i>Accountability</i>	Ability to track and measure system activity and account for system use	“MaxTrax is the most accountable system because it is the only alternative that logs on each user by number and provides a full set of reports to the system supervisor.”

Step 4: Review Comparison and Ranking of Alternatives

You should next review how your agency ranked alternatives. *Methods used to rank alternatives should be documented in the analysis of alternatives*. Ranking criteria should be reasonable and relate to the acquisition mission and objective. Examples of ranking criteria include:

- Minimizing personnel expenses over the systems life,
- Limiting development time so resources are in use quickly,
- Retaining a centralized information repository for reasons of security, *or*
- Distributing processing to minimize point-of-entry delays.

27.4 How to Review an Analysis of Alternatives *(continued)*

Step 5: Review Costs and Benefits

You should next review how your agency evaluated costs and benefits and ensure that several standards are met. These include evaluation of costs and benefits are evaluated:

- For at least three alternatives
- Over the projected systems life
- With discounting to present value.

If benefits do not exceed costs over the systems life, justification for the expenditure should be compelling. If you need to refer to these requirements, see Chapter 28.

Step 6: Review Selection Decision for Most Advantageous Alternative

The purpose of an analysis of alternatives (and benefit-cost analysis when it is a separate document) is to determine the one most advantageous alternative among those alternatives that satisfy the Government's requirements.

Most advantageous alternative—the alternative that provides the greatest value to the Government over the system life, in terms of price, cost, quality, performance and any other relevant factors. (FIRM 201-4.001)

By definition, the determination of the most advantageous alternative must include consideration of cost. You should closely review any analysis of alternatives that excludes all but one alternative without a cost evaluation.

The most advantageous alternative means an alternative that offers the best mix of technical benefits and price. It is not necessarily the “best” technical alternative at the highest price. Nor is it necessarily the lowest cost alternative: that delivers fewer technical benefits. The most advantageous alternative means that for the dollars expended, the alternative delivers maximum benefits.

This is similar to a “best value” evaluation strategy. That is, the Government determines that it is worthwhile to pay more than the lowest price offered, so long as the benefits (advantages) outweigh the additional costs (disadvantages). (Benefits may include nonquantifiable as well as quantifiable advantages.)

(Topic continued on next page)

27.4 How to Review an Analysis of Alternatives *(continued)*

Step 6: Review
Selection Decision
for Most
Advantageous
Alternative
(continued)

In the following table, an agency is considering several alternatives for system development services for a computer system, with different mixes of in-house support, contractor support, and custom software and off-the shelf software. Which is the more advantageous alternative?

COMPARISON OF ALTERNATIVES		
	Price	Completion Time
Alternative A	\$1,000,000	100 days
Alternative B	\$1,500,000	30 days
Alternative C	\$5,000,000	15 days

If price is the main or only consideration, you would conclude that Offer A is clearly the most advantageous alternative.

However, suppose the computer system will provide aid to victims of a natural disaster or hungry refugees? What's the value of human suffering or a human life? Or suppose the system is so essential to national defense that it must be installed as soon as possible, but not later than 25 days. Are 5 days worth \$3,500,000? Is the most advantageous alternative B or C? What would your decision be? Should the 25 day requirement be reassessed? Should the dollar estimates be rechecked? What are the risks in choosing B (lower cost) over C (earlier completion date)? What are the risks in choosing C (earlier completion date) over B (lower cost)?

If you were the contracting officer or contracting specialist in this example, you would certainly want to check the analysis of alternatives that selected either A, B, or C very carefully. You would want to make sure the analysis didn't leave out any important factors, use faulty or obsolete market data, or arrive at conclusions unsupported by facts.

Fortunately, most analyses of alternatives are not life and death matters, nor as dramatically different as this example. However, you must be prepared to review each analysis of alternatives to make sure that the conclusions are reasonable and are based on a valid analysis of the available alternatives.

27.4 How to Review an Analysis of Alternatives *(continued)*

Suggested Questions

You can use questions such as ones that follow in your analysis. Remember to add your agency's requirements for content of analyses of alternatives to your worksheets. Remember also to use the list as an aid to your review—not as strict rules for content.

Suggested Questions: Reviewing an Analysis of Alternatives		
Step	Action	Considerations
1	Review objectives, assumptions, and constraints	Does the analysis of alternatives (or the requirements analysis) indicate the procurement's objectives?
		Do the assumptions seem reasonable?
		Do the constraints limit the range of alternatives?
		Is the limitation justified?
2	Review technical and acquisition alternatives	Does the analysis of alternatives document the results of the market survey?
		Are a broad range of technical and acquisition solutions considered?
		Are GSA's mandatory-for-use programs considered? <ul style="list-style-type: none"> • FTS2000 network • Consolidated local telecommunications service • NSEP program • FMSS MAS contract program
		Are GSA's mandatory-for-consideration programs considered? <ul style="list-style-type: none"> • Federal Software Exchange Program • Excess FIP equipment • Federal Secure Telephone Service • Information Systems Security
		Are reassignment, reutilization, and sharing considered?
		Is contracting, including small purchase and small and disadvantaged business set-asides, considered if mandatory sources are unavailable?
		Are nonmandatory programs and existing contracts that might satisfy the need considered as alternatives?
		Are any logical alternatives or sources not considered?
		Does the analysis of alternatives conclude that <i>only one solution</i> will meet the need—rather than out of several <i>one best meets</i> the need?

27.4 How to Review an Analysis of Alternatives *(continued)*

Suggested
Questions
(continued)

Suggested Questions: Reviewing an Analysis of Alternatives		
Step	Action	Considerations
3	Review risks and effects	Are risks determined for viable alternatives?
		Are the risks appropriate?
		Do the risks unduly restrict competition?
4	Review comparison and ranking of alternatives	If there are too many alternatives to evaluate for costs and benefits, are alternatives ranked?
		Is the basis for ranking clear and reasonable?
		Is the analysis of alternatives <i>improperly</i> used to eliminate (without consideration of cost) all but the favored technical solution from serious consideration?
5	Review costs and benefits	Are costs and benefits evaluated for three alternatives
		Are costs and benefits evaluated over the projected systems life?
		Are costs and benefits discounted to present value?
		Is the benefit-cost evaluation the basis for selection of the most advantageous alternative?
		Can costs and benefits be used for performance measures?
6	Review selection decision for most advantageous alternative	Does the solution support the acquisition's objectives?
		Is the rationale for selection of the most advantageous alternative documented?
		Is cost considered?
		Is the basis for selecting the most advantageous alternative clear and compelling?
		Is the selection justified?
In Summary		Is the size, scope, and complexity of the alternatives analysis commensurate with the size, scope, and complexity of the acquisition?
		Do I understand the alternatives the requiring activity considered?
		Is the information clear, complete, and convincing?

SUMMARY

In this chapter, you learned how to analyze an analysis of alternatives. You learned that you should review both technical and acquisition alternatives to make sure that the selection of the most advantageous alternative is made from a broad range of acceptable alternatives. In the next chapter, you will learn benefit cost and present value analyses.

CHAPTER 28

BENEFIT-COST AND PRESENT VALUE ANALYSIS

Chapter Vignette

“I can see that determining the best single alternative in a FIP acquisition requires a number of steps and a lot of thought,” said Mark.

“It can seem involved,” Marcia replied, “but taking them a step at a time simplifies the process. Remember that after the alternatives analysis identifies several possible alternatives, the agency must choose the best alternative to determine the acquisition strategy. Remember also that ‘best’ in a benefit-cost analysis does not mean just the best technical solution or the lowest cost solution. It means the best solution considering both costs and benefits. Let’s talk about how that is done.”

Course Learning Objectives

At the end of this chapter, you will be able to:

Overall:

Describe the concept and purpose of benefit-cost and present value analysis.

Individual:

- 28.1 Explain the requirements for and purpose of a benefit-cost analysis.
- 28.2 Explain the difference between a benefit-cost and cost effectiveness analysis.
- 28.3 Explain the concept, purpose, and key factors of present value discounting.
- 28.4 Explain the requirements for present value analysis.
- 28.5 Explain how and where present value analysis is used in the acquisition process.
- 28.6 Describe the steps involved in a benefit-cost analysis.
- 28.7 Define unique terms used in present value analysis.

Chapter Overview

Scope

As you learned in Chapter 26, the alternatives and benefit-cost analyses help determine respectively:

- What alternatives are available to meet my need?
- Which alternative is the most cost-beneficial?

Chapter 26, *The Purpose and Content of an Analysis of Alternatives*, addresses the first question. The alternatives analysis seeks to determine *many ways* to meet the need. This chapter on benefit-cost and present value analysis addresses the second question. The benefit-cost analysis seeks to determine the *most cost-beneficial way* to meet the need.

Remember that for large acquisitions, these two questions are often answered with separate documents: the alternatives analysis and the benefit-cost analysis. For smaller acquisitions, both questions may be answered by a single document.

In this chapter, *Benefit-Cost and Present Value Analysis*, we will focus on the process of selecting the *best alternative* for acquiring needed goods and services, considering both costs and benefits. You will also learn about present value analysis, including when and how present value is used in the acquisition process.

References

To understand fully the topics discussed in this chapter, you may need to refer to regulatory and policy documents:

- OMB Circular A-130, *Management of Federal Information Resources*;
 - OMB Circular A-94, *Guidelines and Discount Rates for Benefit-Cost Analysis of Federal Programs*;
 - OMB Circular A-11, *Preparation and Submission of Budget Estimates*; and
 - FIRM 201-4.001, 201-20.203-2, 201-39.1401, 201-39.1402-1, and 201-39.1501-1.
-

Chapter Overview *(continued)*

Topics in This
Chapter

The major topics in this chapter are:

SECTION	TITLE	PAGE
28.1	Requirements for Benefit-Cost Analysis	28-5
28.2	Benefit-Cost and Cost Effectiveness Analysis	28-7
28.3	Overview: Benefit-Cost Analysis	28-9
28.4	The Factors of Time and Interest in Present Value Discounting	28-10
28.5	Analysis and Present Value Discounting	28-18
28.6	Steps in Benefit-Cost Analysis	28-20
28.7	Unique Terms Used in Benefit-Cost and Present Value Analysis	28-26

28.1 Requirements for Benefit-Cost Analysis

Introduction Federal policies related to benefit-cost analysis appear in both OMB Circulars and in the FIRMR. *OMB's policies are the most important and have precedence over the FIRMR.* This is important for you to understand, because as presently written, the FIRMR contradicts OMB's policies.

OMB Policies OMB has published policies related to benefit-cost analysis in three circulars:

- OMB Circular A-130, *Management of Federal Information Resources*;
- OMB Circular A-94, *Guidelines and Discount Rates for Benefit-Cost Analysis of Federal Programs*; and
- OMB Circular A-11, *Preparation and Submission of Budget Estimates*.

The newest policies are in OMB Circular A-130, Transmittal Memorandum No. 2, issued in July 1994. It requires Federal agencies to “prepare, and update as necessary throughout the information system life cycle, a benefit-cost analysis for each information system . . . at a level of detail appropriate to the size of the investment.”

This policy had also been previously published in the annually updated OMB Circular A-11. For example, in 1993 OMB Circular A-11, Transmittal Memorandum No. 64, section 43-7, indicated:

“Agencies are required to prepare benefit-cost analyses for all proposed investments in information systems at a level of detail appropriate to the size of the investment the project will require. Agencies must submit such analyses [as part of the budget process] before any major information system initiatives can be considered for funding. However, OMB may require submission of the benefit-cost analysis for any information system initiative contained in the agency budget request.”

So OMB's policy is clear. A benefit-cost analysis is required for *every* proposed acquisition of information technology and is maintained for every operational information system through its life cycle.

(continued on next page)

28.1 Requirements for Benefit-Cost Analysis *(continued)*

OMB Policies (continued)

OMB Circular A-94 applies in general “to any analysis used to support Government decisions to initiate, renew, or expand programs or projects which would result in a series of measurable benefits or costs extending for three or more years into the future.” It provides detailed economic policies for benefit-cost analysis, cost effectiveness analysis, and lease-purchase analysis. For example, these policies address:

- When cost effectiveness analysis may be used instead of benefit-cost analysis, and
- What discount rate to use for present value and lease-purchase analysis.

You will learn more about cost effectiveness analysis, discount rates, and present value later in this chapter and about lease-purchase analysis in the next chapter.

FIRMR Policies

FIRMR 201-20.203-2

FIRMR 201-20.203-2, *Cost for each alternative*, provides:

- (a) In the analysis of alternatives, agencies shall calculate the total estimated cost, using the present value of money, for each feasible alternative unless the anticipated cost of the acquisition is \$50,000 or less. The total estimated cost for each alternative shall include system life cost for that alternative and any other costs, that can be identified with the alternative, incurred either before or after the system life period.
- (b) When the anticipated cost of the acquisition is \$50,000 or less, the total estimated cost may be limited to an analysis demonstrating that the benefits of the acquisition will outweigh the costs.

OMB policy states that benefits be identified and quantified except in several specific circumstances when a cost effectiveness analysis may be conducted instead of a benefit-cost analysis.

So remember OMB’s policies in OMB Circular A-94. *Benefit-cost analyses commensurate with the size and complexity of the acquisition are required for **all** information systems and information technology procurements.*

28.2 Benefit-Cost and Cost Effectiveness Analysis

What is a Benefit-Cost Analysis?

OMB Circular A-94 defines benefit-cost analysis as “a systematic quantitative method of assessing the desirability of Government projects or policies when it is important to take a long view of future effects and a broad view of possible side-effects.”

More simply, a benefit-cost analysis is the process of identifying and measuring costs and benefits over the systems life, normally for several competing alternatives. As you learned in Chapter 27, cost-benefit analysis is similar to a best value acquisition strategy. Both costs *and* benefits affect the determination of the most advantageous solution.

Let’s consider how we apply benefit-cost analysis (perhaps without thinking about it) in everyday situations. Suppose you are shopping for a car. You would be likely to consider cost first, in terms of your budget and financial plans. Once you determine your price range, you would probably go look at several models. As you shop and compare, you refine and quantify the costs. You might consider not only purchase costs, but also operational costs such as fuel efficiency, maintenance costs, and estimated repair costs. But the whole time you are considering costs, you are also considering benefits: two door or four door, sun roof or not, anti-lock brakes or not? These benefits may require extra costs, but you may value the benefit and decide to pay extra. In other words, you value the safety benefit of the anti-lock brakes or the luxury of sunshine. These values may be difficult or impossible to quantify. What if anti-lock brakes help you avoid a serious accident? If they do, the several hundred dollar investment was a bargain — even though the effect and expense of an avoided accident can’t be easily calculated.

Most of us never write down the process of evaluating costs and benefits in our own decisions. But as Federal acquisition professionals, we are responsible to the public for the wise expenditure of tax dollars. We must carefully analyze costs and benefits over time and base our selection decision on those costs and benefits. We then record the rationale for our decision selecting one alternative as the most advantageous. We call this the benefit-cost analysis.

28.2 Benefit-Cost and Cost Effectiveness Analysis *(continued)*

What is a Cost Effectiveness Analysis?

OMB Circular A-94 defines cost effectiveness analysis as “a systematic quantitative method for comparing the costs of alternative means of achieving the same stream of benefits or a given objective.”

More simply, a cost effectiveness analysis is a benefit-cost analysis without the benefits. A cost effectiveness analysis is conducted only in situations when:

- Costs will differ but benefits will be equal *or*
- Benefits cannot be measured.

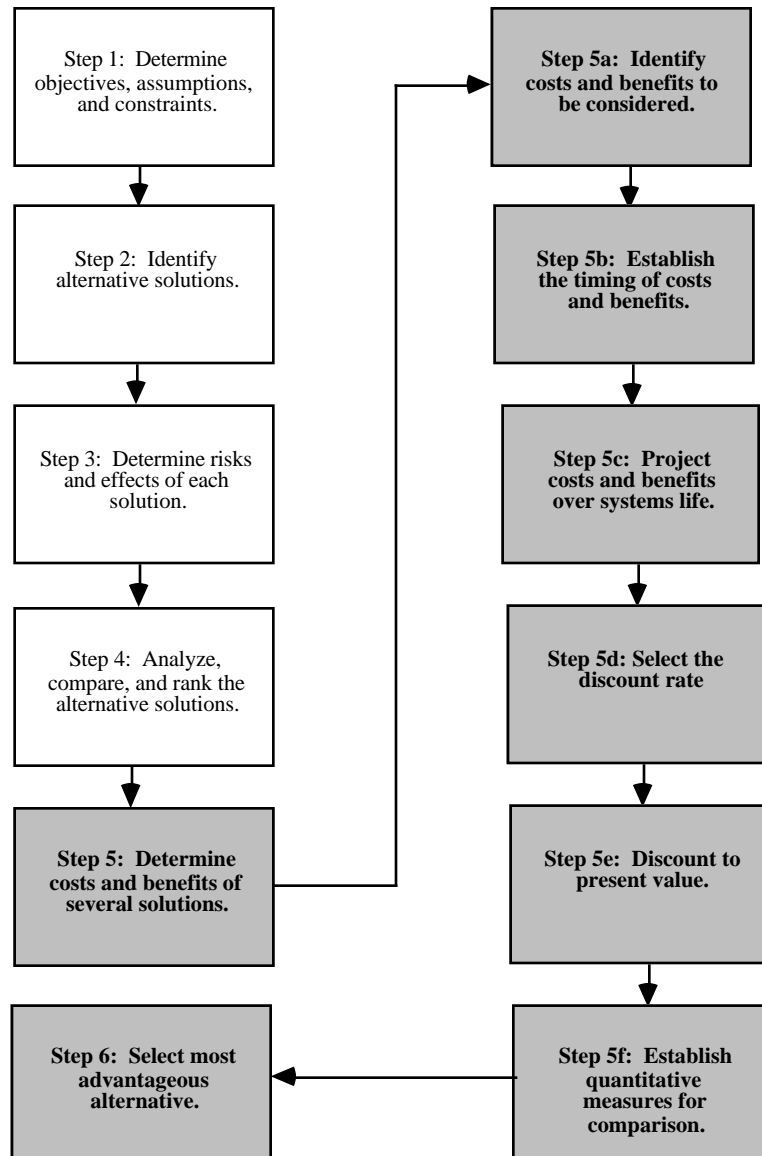
OMB suggests that analyses of alternatives for defense systems often fall in the second category.

You should know that most analyses for information technology will have quantifiable (measurable) benefits. It can be difficult to measure benefits, but it is normally possible *with some effort*. For example, differences in speed, capacity, and the value of compatibility are measurable benefits. If your acquisition team says there are no benefits or that benefits can't be measured, look closely.

28.3 Overview: Benefit-Cost Analysis

Overview of Benefit-Cost Analysis

In Chapter 26, you learned that the process of analyzing alternatives and selecting the most advantageous alternative includes the step to “determine costs and benefits of several solutions.” In this chapter, we will take a closer look at what is involved in analyzing costs and benefits. The flowchart below shows the key steps in the benefit-cost analysis and their relationship to other steps in the process.



You will notice that there are some new terms in this flowchart. Before discussing the key steps in detail, we’ll consider what is meant by discounting and present value.

28.4 The Factors of Time and Interest in Present Value Discounting

Why is time important?

There's an old saying: time is money. We might say here: time is money, especially in a benefit-cost analysis.

We understand this intuitively in our daily lives. If someone says — *Do you want the \$20 I owe you today or next pay period?* — most of us would answer “today.” But if someone says — *Can you pay me the \$20 you owe me today or do you want to wait until next pay period?* — most of us would answer “next payday.”

This is what is known as the “time value of money.” One measure of the time value of money is interest. We're all familiar with this. If we have \$100 in a savings bond earning 7 percent interest, our \$100 will be worth \$107 next year.

$$\$100 \times 1.07 = \$107$$

What is discounting?

Discounting is the opposite of calculating interest. It answers the question, what would next year's \$107 savings bond be worth in today's dollars?

One simple way to find the answer to this question is to use a discount table. For example, the table below is a simple table for a 7 percent discount rate.

Years	Discount Factor
1	.9346
2	.8734
3	.8163
4	.7629
5	.7130

Using our hypothetical savings bond example, we would take the value of next year's savings bond (\$107) and multiply it by the one year discount factor of .9346. The answer is \$100. The calculation looks like this:

$$\$107 \times .9346 = \$100$$

That's all there is to present value discounting.

28.4 The Factors of Time and Interest in Present Value Discounting

(continued)

What is Present Value Analysis?

You now know that present value discounting converts the value of tomorrow's dollars into today's dollars. Another way to describe this is that *present value analysis considers the effect of time and the value of money in financial decisions*. Present value discounting is based on the economic fact that a dollar today is worth more than a dollar at some time in the future. This fact affects costs and benefits differently. We want to achieve benefits today and defer costs until next year. So we need to consider time when making financial decisions.

Effect of Timing on Present Value Results

Let's consider a somewhat unlikely situation. Suppose you owe Gwyn \$1000 which is due to be paid next year. On the other hand, Jack owes you \$1000, also due to be paid next year. And you have \$1000 in the bank. Your net worth (assets less liabilities) would be \$1000, expressed in present value.

Note in the table below that \$1,000 and \$1,070 next year are discounted to \$935 and \$1,000 respectively in today's dollars.

	This Year	Interest	Next Year	Discount Rate	Present Value
Gwyn			(\$1,000)	.9346	(\$935)
Jack			\$1,000	.9346	\$935
Bank	\$1,000	1.07	\$1,070	.9346	\$1,000
Net Worth					\$1,000

Next suppose that Gwyn and Jack are going on a world cruise and won't be back for a year. Each asks, "Do you want to settle now, or later?" What is the effect of your decision?

(Topic continued on next page)

28.4 The Factors of Time and Interest in Present Value Discounting

(continued)

Effect of Timing
on Present Value
Results
(continued)

Most of us would ask Jack to pay us before he leaves. Many of us would promise to pay Gwyn upon her return. Assuming that you ask Jack to pay, put the money in the bank, and tell Gwyn you'll pay her later, your decision would increase your net worth expressed in present value by \$65.

	This Year	Interest	Next Year	Discount Rate	Present Value
Gwyn			(\$1,000)	.9346	(\$935)
Jack					\$0
Bank	\$2,000	1.07	\$2,140	.9346	\$2,000
Net Worth					\$1,065

How would this change if you did the opposite? Suppose you wanted Jack to hold onto the money in case of emergency, but wanted to settle your debt (using your bank fund) with Gwyn before she left? This decision would decrease your net worth expressed in present value by \$65.

	This Year	Interest	Next Year	Discount Rate	Present Value
Gwyn					
Jack			\$1,000	.9346	\$935
Bank					
Net Worth					\$935

Notice in the examples above that the timing of payments determines whether your net worth is \$1,000 or \$1,065 or \$935. Notice also that you can quantitatively analyze the effect of your decisions. *So you can see that the timing of payments is important to financial decisions.*

Effect of Discount
Rate on Present
Value

Just as the timing of payments can affect financial decisions, so can discount and interest rates. For example, when interest rates are high, many of us try to save more and borrow less. When interest rates are low, we're more likely to borrow — refinancing a mortgage or locking in low rates for a new home, remodeling, or car.

Let's consider how we would measure the effect of the discount rate on an acquisition decision.

(Topic continued on next page)

28.4 The Factors of Time and Interest in Present Value Discounting

(continued)

Effect of Discount
Rate on Present
Value
(continued)

Assume that you are buying a new computer system. Two vendors offer to sell you the identical computer system for \$10,500. However, Vendor #1 demands cash on delivery. Vendor #2 will provide you an interest-free loan for one year. From whom would you buy the computer system? You would probably buy it from Vendor #2. But how much difference would it make? Present value discounting provides the answer: at 7 percent, \$687.

	Vendor #1	Vendor #2
This Year	\$10,500	
Next Year		\$10,500
7% Discount Factor	1	.9346
Present Value	\$10,500	\$9,813

In the preceding example, Vendor #2 is clearly the low-cost choice — but what if Vendor #1 offers the computer system at a lower price, such as \$10,000? Who has made the best offer? By comparing the alternatives' present values, you should be able to quickly tell that Vendor #2 is still the best choice. The simple present value analysis would look like this:

	Vendor #1	Vendor #2
This Year	\$10,000	
Next Year		\$10,500
7% Discount Factor	1	.9346
Present Value	\$10,000	\$9,813

But what would happen if the discount rate were 4 percent instead of 7 percent? Would it change the result?

You can estimate quickly with an interest calculation. If you invest \$10,000 at 4 percent interest, it would be worth \$10,400 at the end of one year — less than Vendor #2's \$10,500 offer. In other words, \$10,000 today is the *present value* of \$10,400 one year from now, if the interest rate were 4 percent. In this situation, Vendor #1 has made the best offer.

(Topic continued on next page)

28.4 The Factors of Time and Interest in Present Value Discounting

(continued)

Effect of Discount
Rate on Present
Value
(continued)

Changing the discount rate from 7 percent to 4 percent changes the discount factor from .9346 to .9615. The present value analysis would look like this:

	Vendor #1	Vendor #2
This Year	\$10,000	
Next Year		\$10,500
4% Discount Factor	1	.9615
Present Value	\$10,000	\$10,096

So you can see that the discount rate is one of the key factors that affects the present value determination.

Deciding which
Discount Rate to
Use

You will probably not be involved in selecting a discount rate, but you should know how it is done.

OMB Circular A-94, Appendix C, sets the discount rates for use in present value analysis. OMB updates the appendix each year around February based on the President's Budget. Using the provisions of the circular, agencies select one of three categories of rates to use:

- 7 percent for public investments,
- Nominal interest rates, or
- Real interest rates.

This sounds more complicated than it is.

OMB policy in Circular A-94 indicates that a standard discount rate based on 7 percent is used where benefits accrue to the public. Since most government information systems deliver benefits of various types to the public, the 7 percent factor is most frequently used. [The standard discount rate used to be 10 percent. OMB changed it to 7 percent in 1992.]

(Topic continued on next page)

28.4 The Factors of Time and Interest in Present Value Discounting

(continued)

Deciding which
Discount Rate to
Use
(continued)

If the system does not provide money, information, or some other benefit to the public, agencies use a discount rate based on either nominal or real interest rates. What's the difference between a nominal rate and a real rate? Inflation.

Inflation is factored into *nominal interest rates*. Nominal interest rates are normally used in budgeting and procurement cost evaluation. If you think about it, it makes sense. You must account for inflation when you plan and budget for future year costs. Similarly, contractors bid system life costs into which they've factored inflation. In other words, vendors bid nominal prices which you would discount with nominal rates. Nominal rates are sometimes called current rates with the results expressed in current dollars.

Inflation is *not* factored into *real interest rates*. *Real interest rates are normally used in benefit-cost analysis when the 7 percent standard discount rate is not.* Why isn't inflation normally considered in benefit-cost analysis? As OMB indicates: "Future inflation is highly uncertain. Analysts should avoid having to make an assumption about the general rate of inflation whenever possible." Real interest rates are sometimes called constant rates with the results expressed in constant dollars.

So, normally you will use the standard rate of 7 percent or the real interest rate in present value discounting for benefit-cost analysis. You will probably use nominal interest rates in lease-purchase analysis and cost evaluation. OMB Circular A-94 does not dictate this, however.

As you've learned, time affects the value of money. Just as banks increase interest rates with longer-term certificates of deposit, OMB increases nominal and real interest rates based on longer terms. For example, the rates published in 1994 were:

Real Interest Rates: March 1994 - February 1995				
3 Year	5 Year	7 Year	10 Year	30 Year
2.1	2.3	2.5	2.7	2.8
Nominal Interest Rates: March 1993 - February 1994				
3 Year	5 Year	7 Year	10 Year	30 Year
5.0	5.3	5.5	5.7	5.8

(Topic continued on next page)

28.4 The Factors of Time and Interest in Present Value Discounting

(continued)

Deciding which
Discount Rate to
Use
(continued)

Unless agency policy dictates the use of a specific discount rate or you have other justifiable rationale, you should select a discount rate based on OMB Circular A-94, Appendix C. The discount rate selected from Appendix C should be for the same number of years as you are evaluating in your analysis. If your period of analysis does not match any of the discount rate periods in Appendix C, you can use straight line interpolation to establish a rate. For example, a straight line interpolation for a four year real discount rate would be 2.2 (midway between the three year rate of 2.1 and the five year rate of 2.3).

You can get assistance and rate update information from OMB's Office of Economic Policy at (202) 395-3391.

Calculating a
Discount Rate

You'll note from the preceding example that OMB publishes a table of interest rates, not discount factors. As we indicated earlier, one way to determine a discount factor is to use a discount table. Although these should be available from your finance office, it's easy to calculate an annual discount rate table.

OMB expresses the formula for calculating discount factors, using i as interest and t as time, as:

$$1 / (1 + i)^t$$

Again, this looks worse than it is. It means that:

- You add the interest rate and the number one,
- Repeat the result times itself for the number of the year that you want the factor [for example, (1.07) for the first year or (1.07*1.07) for the second year],
- Divide the result into 1.

All discount factors are less than one.

28.4 The Factors of Time and Interest in Present Value Discounting

(continued)

Calculating a
Discount Rate
(continued)

You can create a table for the 7 percent standard discount rate using a calculator or spreadsheet program. The results might look like this:

Year	Formula	Discount Rate
1	$1 / 1.07$.9346
2	$1 / (1.07*1.07)$.8734
3	$1 / (1.07*1.07*1.07)$.8163
4	$1 / (1.07*1.07*1.07*1.07)$.7629
5	$1 / (1.07*1.07*1.07*1.07*1.07)$.7130

The formula provides year-end discount rates. When costs and benefits occur in a steady stream throughout the year, mid-year discount factors are more appropriate. To convert year-end discount factors to mid-year discount factors, multiply the year-end rate by 1.0344. The results look like this:

Year	Mid-Year Rate	Year-End Rate
1	.9667	.9346
2	.9035	.8734
3	.8444	.8163
4	.7891	.7629
5	.7375	.7130

28.5 Analysis and Present Value Discounting

Importance of Present Value Discounting

You now know that time and discount rates can affect financial decisions. Present value discounting is the technique we use to *equalize the comparison of costs and benefits that occur unequally over time*. This concept is especially important to bid and proposal evaluation. Without present value discounting, offerors could “game the system” and the government might not select the most advantageous system life offer (considering the cost of money).

Present value discounting, sometimes referred to as present value analysis, is a technique used by government and industry in many types of analysis.

Requirements for Present Value Analysis

OMB Circular A-94

OMB Circular A-94 requires present value discounting in any analysis of a series of measurable benefits or costs extending for three or more years into the future. However, agencies should seriously consider using present value discounting for measurable costs and benefits occurring over more than one year when there are differences in the timing of payments among alternatives.

FIRMR 201-4.001

By definition, present value is an inherent part of the lowest overall cost determination. FIRMR 201-4.001 provides:

Lowest overall cost means the least expenditure of funds over the system life, price and other factors considered, including, but not necessarily limited to—

- (a) Prices for the FIP resources;
- (b) The present value adjustment, if used; and
- (c) The identifiable and quantifiable costs —
 - (1) Directly related to the acquisition and use of the FIP resources;
 - (2) Of conducting the contract action; and
 - (3) Of other administrative efforts directly related to the acquisition process.

FIRMR 201-39.1401

FIRMR 201-39.1401, which addresses general provisions for sealed bidding, requires contracting officers to consider options, acquisition methods, present value discount factors, and other price-related factors when selecting the most advantageous bid.

(Topic continued on next page)

28.5 Analysis and Present Value Discounting

Requirements for
Present Value
Analysis
(continued)

FIRM 201-39.1402-1 and 201-39.1501-1
--

FIRM 201-39.1402-1 and 201-39.1501-1 elaborate on this policy. When the timing of payments is expected to vary among the alternatives being considered, agencies must discount offered prices to present value and apply the results in determining the most advantageous offer to the Government. GSA has proposed adding the condition “or where payments will be made over an extended period” to these provisions. GSA’s proposed rule would also change a reference to OMB Circular A-94 (rather than A-104 as the FIRM presently reads). You should check the current FIRM provisions.

Examples of
Present Value
Analysis in
Acquisition

During a FIP resource acquisition, there are numerous situations when you might apply present value analysis. For example, you might discount:

- during market research, to determine differences in cost among available sources for an identical FIP product or service available under different terms and conditions;
- during planning or benefit-cost analysis, to project and compare life cycle costs for several competing FIP resource systems or solutions;
- as part of a lease-purchase analysis or a “make or buy” analysis, to compare the costs on an equalized basis;
- to analyze the effect in present value of cash flow, such as when one agency “rents” computer time to other agencies for reimbursement;
- during analysis of alternatives, to compare cost differences among available alternatives; and
- as part of a source selection process, especially under a “best value” acquisition strategy.

In short, you should be prepared to use present value analysis when you compare costs (especially across a period of three or more years) and when the financial terms and conditions (especially rates and time) from various offerors or sources are different.

28.6 Steps in Benefit-Cost Analysis

Overview of Benefit-Cost Analysis

Now that you know about discount rates and present value analysis, let's put it all together by covering the steps in a benefit-cost analysis (shown in the flowchart on page 28-9). Although you will probably not be part of the acquisition team developing the benefit-cost analysis, you may be required to review one or to contribute information. You should be familiar with what is involved.

Step 5a Identify Costs and Benefits

The first step is to identify the costs and benefits that will be measured for the current system (the status quo) and for the alternatives. Even if the status quo is not an acceptable alternative, your agency should know what the current system costs and the reasons it is unacceptable. These are fundamental management principles.

Your agency should identify both direct and indirect costs and benefits. Direct costs relate directly to the acquisition, such as equipment and software costs. Indirect costs are related costs, such as those associated with acquiring property and preparing it for use. Examples of direct benefits are reduced operational costs and reduced systems staff. Indirect benefits might include productivity improvements for professionals using the system information or improved reporting capabilities. However, the categorization as "direct" or "indirect" is unimportant.

Two things are important: to identify all measurable costs and benefits and to apply them properly. For example, costs to meet projected workload growth usually apply regardless of the solution. Although the amount of cost may vary among the status quo and alternatives, the cost element applies to all. However, if only one alternative requires certain costs, then such costs are measured only for the alternative to which they apply. For example, if one of the alternatives requires three Government employees full time for support, the costs of their wages and benefits, plus any travel costs, are included for the alternative to which they apply. This is essential to estimating as accurately as possible system life costs.

(Topic continued on next page)

28.6 Steps in Benefit-Cost Analysis *(continued)*

Step 5a Identify Costs and Benefits (continued)

Some guidance documents suggest that benefit-cost analyses should include estimates of *residual value*. The FAR describes residual value as “the proceeds, less removal and disposal costs, if any, realized upon disposition of a tangible capital asset.” However, as a matter of practicality, this is normally *not* done in the Federal government for information technology resources.

The following are examples of the types of costs and quantifiable (tangible) and nonquantifiable (intangible) benefits that may apply to an information technology procurement. You can probably think of more.

Examples of Costs	Examples of Benefits
Site and facility	Reduced or controlled costs
Equipment	Reduced staffing
Shipping and installation	Increased productivity
Software purchase and fees	Improved staffing utilization
System testing	Increased productivity
Conversion	Elimination of manual functions
Studies	Increased capacity
Database preparation	Reduced error rate
Personnel	Improved management information
Travel	Improved controls
Training	Automated interfaces
Overhead	Less data redundancy
Supplies	Faster retrieval
Utilities	Improved public assistance
Security	Improved access
Maintenance and support services	Improved security

28.6 Steps in Benefit-Cost Analysis *(continued)*

Step 5b
Establish the
Timing of Costs
and Benefits

The next step is to determine the timing of the costs and benefits for each alternative in the present value analysis. Costs and benefits occur at different times in the acquisition life cycle. For example, there may be some one time or “up front” costs (such as site preparation or conversion) that occur early in the acquisition life cycle and are not repeated. These are sometimes referred to as “nonrecurring costs.” On the other hand, there are recurring costs (such as system maintenance costs) that begin with installation and continue throughout the life cycle. Although costs are incurred throughout the systems life (including the planning and acquisition phase), benefits typically begin sometime after contract award.

Step 5c
Project Costs and
Benefits Over the
Systems Life

The next step is to establish values for costs and benefits over the system's life. These are called projected costs and benefits. (Projected costs and benefits that have been discounted to their present values are called discounted costs and benefits.)

Program, technical, and financial staff typically handle these tasks, although contracting staff may assist as part of the market research phase. The values for costs and benefits are normally developed without considering inflation. However, if firm future costs are available from contracts, commercial price lists, or budgets, use them.

Step 5d
Select the Discount
Rate

The next step is to select the discount rate to use in discounting projected costs and benefits to their present values. If your agency hasn't yet established the discount rate, you can determine the proper discount rate by consulting Appendix C of OMB Circular A-94. As you've learned, seven percent or real interest rates are normally used for benefit-cost analysis.

Step 5e
Discount to
Present Values

Once the values of costs and benefits are projected and the discount rate selected, the annual and system life costs for each alternative are discounted to their present value. Remember that the purpose of discounting is to equalize the comparison of varying streams of costs and benefits over time.

28.6 Steps in Benefit-Cost Analysis *(continued)*

Step 5f
Establish
Quantitative
Measures for
Comparison

Once costs and benefits have been projected and present values determined, three specific quantitative, comparative measures are normally developed.

They are:

- Net present value, sometimes referred to as net benefit or net cost;
- Benefit-cost ratio; and
- Breakeven point or payback.

Net present value subtracts the present value of costs from the present value of benefits. If benefits exceed costs, a net benefit results. If costs exceed benefits, a net cost results. The calculation looks like this:

$$\frac{\text{Present Value of Benefits} - \text{Present Value of Costs}}{\text{Net Present Value}}$$

The *benefit-cost ratio* is calculated by dividing the total present value benefits by the total present value costs. If benefits equal costs, the ratio is 1. If benefits exceed costs, the ratio is more than 1: the system will breakeven. If benefits are less than costs, the ratio is less than 1: the system will not breakeven. The calculation for the benefit-cost ratio looks like this:

$$\frac{\text{Present Value of Benefits}}{\text{Present Value of Costs}} = \text{Benefit-Cost Ratio}$$

There's an easy way to think of the benefit-cost ratio. If the benefit-cost ratio is 1.5, it means that for every \$1.00 invested, \$1.50 of benefits will accrue.

Breakeven or payback is the calculation of how many months it will take for cumulative benefits to equal cumulative costs. The system will only breakeven if projected benefits equal or exceed projected costs.

Undiscounted (projected) costs and benefits are used to determine the breakeven point.

(Topic continued on next page)

28.6 Steps in Benefit-Cost Analysis *(continued)*

Step 5f
Establish
Quantitative
Measures for
Comparison
(continued)

The table below shows how this information might appear in a summary table of a benefit-cost analysis.

COMPARISON OF ALTERNATIVES			
Description	Status Quo	Alternative 1	Alternative 2
Total Present Value Benefits	0	8,690,663	8,690,663
Less Total Present Value Costs	7,658,159	8,497,668	10,651,811
Net Benefit (Cost)	(7,658,159)	192,995	(1,961,148)
Benefit-Cost Ratio	0	1.02	.82
Breakeven (Months)	N/A	52	N/A

Let's take a closer look at this information.

This benefit-cost analysis considers the current system (the status quo) and two alternatives. The status quo is an outdated mainframe system that the agency plans to replace. If the agency were forced to retain the system, costs would exceed \$7 million over the systems life while delivering no benefits. This information is useful for establishing a baseline against which competing alternatives can be measured.

The alternatives both use distributed processing technology, one with a more powerful (and expensive) processor than the other. As a consequence, Alternative 2 costs more than Alternative 1. They both deliver the same benefits.

Only Alternative 1 delivers a net benefit. This means that only Alternative 1 claims benefits that are worth more than the system will cost, so it is the only system that will *breakeven* — cumulative benefits will exceed cumulative costs in 52 months. Alternative 1 also shows a *net benefit* of \$192,995 and a *benefit-cost ratio* of 1.02.

These quantitative measures establish powerful arguments for selecting Alternative 1.

28.6 Steps in Benefit-Cost Analysis *(continued)*

Step 6
Select the Most
Advantageous
Offer

As you learned in Chapters 26 and 27, the final step is to select the most advantageous alternative.

<p>Most advantageous alternative — the alternative that provides the greatest value to the Government over the system life, in terms of price, cost, quality, performance and any other relevant factors. (FIRMR 201-4.001)</p>
--

The most advantageous alternative means the alternative that offers the best mix of performance benefits and price. Keep in mind that the previous step addresses quantitative costs and quantitative benefits. But sometimes, an alternative has nonquantifiable or intangible benefits that can outweigh differences in costs. As you've learned, this final decision-making is similar to a best value determination.

28.7 Unique Terms Used in Benefit-Cost and Present Value Analysis

Definition of Unique Terms

You have learned throughout this chapter some of the terms that apply to benefit-cost and present value discounting. They are reviewed below. Be sure you understand and can use these terms correctly.

Benefit-Cost Analysis—a special type of analysis done to determine the relative benefits of a course of action compared to the relative costs. In a benefit-cost analysis, you compare projected and present value benefits against the projected and present value of the costs.

Benefit-Cost Ratio—a number derived by dividing an alternative's present value benefits by present value costs. Benefit-cost ratio is one of several measures used to compare alternatives in a benefit-cost analysis.

Breakeven—the point at which cumulative benefits equal cumulative costs. Breakeven points are based on projected (not discounted) benefits and costs. Breakeven is one of several measures used to compare alternatives in a benefit-cost analysis.

Cost Effectiveness Analysis—a special type of analysis done to compare the relative costs of several alternatives. A cost effectiveness analysis is a benefit-cost analysis without the benefits. It is used when the benefits are the same for all alternatives or when benefits can't be quantified (as in defense systems).

Discount Factor—a multiplier, varying by interest rate and time, used to discount future costs and benefits to their present values.

Discount Rate—the rate used to develop discount factors which convert future costs to their present value. Discount rates are based on what the United States Treasury pays to borrow money for periods from 91 days to 30 years. These rates are published in OMB Circular A-94 and are updated annually at the time of the President's budget submission to Congress. Rate updates are also available upon request from OMB's Office of Economic Policy at (202) 395-3391.

Discounting—the process of converting future dollars to their present values by multiplying future dollars times a discount factor.

(Topic continued on next page)

28.7 Unique Terms Used in Benefit-Cost and Present Value Analysis

Definition of
Unique Terms
(continued)

Net Present Value—the difference between the present value of benefits and the present value of costs; sometimes referred to as a net benefit when benefits exceed costs, or a net cost when costs exceed benefits. Net present value is one of several measures used to compare alternatives in a benefit-cost analysis.

Nominal Discount Rates—discount rates that *are adjusted* for the effect of actual or expected inflation or deflation. Nominal rates are normally used for budgeting, lease-purchase determinations, and cost evaluation. You will find these rates in Appendix C of OMB Circular A-94.

Present Value Analysis—an analysis performed to determine the present value of a future cost or benefit, expressed in today's dollars.

Present Value—the value of a cost or benefit expressed in today's dollars, regardless of the time of acquisition or realization.

Real Discount Rate—discount rates that are *not adjusted* for the effects of inflation or deflation. Real rates are normally used in benefit-cost analysis. You will also find these rates in Appendix C of OMB Circular A-94.

Residual Value—the proceeds, less removal and disposal costs, if any, realized upon disposition of a tangible capital asset. Residual value is normally *not* estimated for FIP resources.

SUMMARY

In this chapter, you learned about the purpose of benefit-cost and present value analysis. In the next chapter, you will learn about lease-purchase analysis.

CHAPTER 29

LEASE vs. PURCHASE OF FIP RESOURCES

Chapter Vignette

“I was wondering,” said Mark, “if present value discounting equalizes costs that occur unequally over time, do we need to discount during lease-purchase analysis?”

“We sure do,” said Marcia. “As you have learned, deciding which rate to use is an agency decision. Let’s talk more about present value discounting in lease-purchase analysis.”

Course Learning Objectives

At the end of this chapter, you will be able to:

Overall:

Describe the concept and purpose of lease-purchase analysis.

Individual:

- 29.1 Describe requirements for lease-purchase analysis.
- 29.2 Identify lease and purchase methods of acquisition.
- 29.3 Identify where to obtain pricing information.
- 29.4 Describe the steps involved in lease-purchase analysis.
- 29.5 Apply discounting methods and other price-related factors to determine lease vs. purchase decisions.

Chapter Overview

Scope

As you learned in Chapter 28, present value discounting equalizes the comparison of alternatives when costs differ over time. In this chapter, you will learn how to apply present value discounting during lease-purchase analysis.

You will also learn about the requirements for making these lease or buy decisions. This chapter explains important requirements in OMB Circular A-94 and the FAR. This chapter also describes lease and purchase methods of acquisition, identifies where to obtain pricing information, and lists the steps involved in lease-purchase analysis.

References

To understand fully the topics discussed in this chapter, you may need to refer to regulatory and policy documents:

- OMB Circular A-94, *Guidelines and Discount Rates for Benefit-Cost Analysis of Federal Programs*, and
- FAR 7.105 and Subpart 7.4

In addition, if you are concerned with contractor-leased FIP resources, you should refer to FAR 31.205-2 and (for DoD employees) DFARS Subpart 239.73.

Topics in This Chapter

The major topics in this chapter are:

SECTION	TITLE	PAGE
29.1	Requirements for Lease-Purchase Analysis	29-4
29.2	Lease and Purchase Methods of Acquisition	29-10
29.3	Where to Obtain Pricing Information	29-15
29.4	Steps in Lease-Purchase Analysis	29-16
29.5	Contractor Leasing of ADPE	29-22

For Assistance

FAR 7.403 indicates that GSA will assist (on agency request) in lease or purchase decisions by providing information such as GSA Nonmandatory FIP Schedule contract pricing, technological developments, and industry or market trends. Contact the Office of Information Resources Management Policy (KMA), GSA, Washington, DC 20405 or call (202) 501-0202.

29.1 Requirements for Lease-Purchase Analysis

Primary Policies

Primary Federal policies related to lease-purchase analysis appear in an OMB Circular and in the FAR. Related provisions are in the FIRM.

OMB Circular A-94: What and When

OMB's policies on lease-purchase analysis are in Circular A-94, *Guidelines and Discount Rates for Benefit-Cost Analysis of Federal Programs*. As you learned in Chapter 28, the circular applies in general "to any analysis used to support Government decisions to initiate, renew, or expand programs or projects which would result in a series of measurable benefits or costs extending for three or more years into the future." The circular includes a section on lease-purchase analysis, sometimes referred to as "lease versus purchase" or "lease or buy" analysis and decision making.

OMB Circular A-94 describes the analysis and when it is to be utilized. Lease-purchase analysis is performed *after the benefit-cost analysis* and supports the decision to acquire a FIP resource. *Lease-purchase analysis determines the most economical way to finance the acquisition.* You should be aware that lease-purchase analysis may be conducted as a stand-alone study during a Requirement Analysis/Analysis of Alternatives and/or as a part of proposal evaluation.

Remember: Do not confuse the lease versus purchase decision with the benefit-cost decision. You FIRST make the benefit-cost decision in order to determine WHETHER to acquire a FIP resource.

Once you HAVE decided to acquire the resource, THEN you make a lease versus purchase decision to decide whether to lease or purchase.

(continued on next page)

29.1 Requirements for Lease-Purchase Analysis (continued)

OMB Circular
A-94:
Applicability and
Conditions
Requiring Lease-
Purchase Analysis

OMB Circular A-94 also specifies when its policies apply and what conditions require completion of a lease-purchase analysis. These are summarized in the table below. *Keep in mind that this analysis can be part of proposal evaluation if you solicit other than purchase.*

Use Lease Versus Purchase Analysis...
<p>If . . .</p> <ul style="list-style-type: none">• You are acquiring a CAPITAL ASSET or a group of related assets• With a fair market value exceeding \$1 million . . . <p>And One or More of the Following Conditions Apply . . .</p> <ul style="list-style-type: none">• Would be leased for three or more years,• Is new, with an economic life of less than 3 years and would be leased for a term of 75% or more of its economic life,• Is built expressly for lease to the Federal government, <i>or</i>• Is leased to the Federal government and clearly has no alternative commercial use. <p>Then . . .</p> <ul style="list-style-type: none">• OMB Circular A-94 provisions on lease-purchase analysis apply, <i>and</i>• You must perform a lease versus buy analysis and make a lease or buy decision.

Capital assets include durable goods, equipment, buildings, facilities, installations, or land. Capital assets are goods, NOT services or supplies. FIP equipment and FIP facilities (systems and space) are capital assets.

For example, if you acquire a computer system or a private branch exchange (PBX) for telephone service in a Government building, you are acquiring capital assets.

(continued on next page)

29.1 Requirements for Lease-Purchase Analysis *(continued)*

OMB Circular
A-94: Justification
for Lease

Because OMB A-94 presumes that purchase is the most economical alternative, a justification is required when an agency leases. *All leases of capital assets covered by OMB Circular A-94 must be justified as preferable to direct government purchase and ownership.* OMB Circular A-94 cites three ways this can be done.

TYPES OF LEASE-PURCHASE JUSTIFICATION	
Justification	Used When:
Separate lease-purchase analysis	<ul style="list-style-type: none"> Acquisition is a separate line-item in the agency's budget, <i>or</i> The agency or OMB determine the buy is a "major acquisition," <i>or</i> The purchase price of the asset or group of assets will exceed \$500 million.
Periodic lease-purchase decisions	OMB approves generic decisions to apply on a recurring basis to a group of similar assets
Formal lease-purchase policy decision	<ul style="list-style-type: none"> Leasing will save substantial money, <i>and</i> Leases are so small or short-term that separate analyses are impractical, <i>and</i> Leases are scored consistent with instructions in OMB Circular A-11, <i>and</i> OMB approves the policy decision.

Although OMB Circular A-94 does not indicate, lease-purchase analysis is required in proposal evaluations for FIP equipment when the agency solicits (or does not restrict submission of) other than purchase. Keep in mind that availability of commercial financing options depends on market practices. The solicitation may identify purchase and other methods of acquisition (i.e., LTOP, LWOP, or lease). Offerors must merge commercial financing options available to them into one of the four methods of acquisition identified in the solicitation.

OMB Circular A-94 also provides detailed procedural guidance, such as the treatment of imputed (indirect) costs including taxes and insurance premiums. **This generally applies to acquisition of real property (i.e., buildings and land).** If you are involved in a lease-purchase analysis involving significant costs, you should contact your financial officer for assistance.

OMB's lease-purchase policy was previously published in OMB Circular A-104. Although that circular was rescinded in 1992, some regulations still refer to it. *So if you see OMB Circular A-104 cited, refer instead to its replacement circular, A-94.*

29.1 Requirements for Lease-Purchase Analysis *(continued)*

FAR: Lease or
Purchase Planning

FAR 7.105(b)(4)

FAR 7.105(b)(4) requires lease-purchase decisions to be addressed as part of the contracting considerations in written acquisition plans. For example, if you plan to evaluate lease-purchase as part of proposal evaluation, you should so state that intention in your acquisition plan.

FAR: Lease or
Purchase Policies

FAR Part 7.4

The Federal Acquisition Regulation sets forth equipment lease or purchase rules in Subpart 7.4. It provides rules on making decisions to lease or purchase that *apply both to the initial acquisition of equipment and the renewal or extension of existing equipment leases*.

The requirement to conduct a lease-purchase analysis as identified in the FAR is required for any method other than purchase prior to execution of an option. Before you exercise an option, you should compare the remaining life cycle costs of leasing the equipment under contract to the current market's purchase (and lease) prices.

FAR: Factors to
Consider

FAR 7.401

FAR 7.401 describes factors that you must consider in a lease or purchase decision. All lease-purchase analyses must consider:

- Estimated length of time the equipment will be used and the extent of use within that period,
- Financial and operating advantages of alternative types and makes of equipment,
- Cumulative rental payments for the estimated period of use,
- Net purchase price,
- Transportation and installation costs,
- Maintenance and other service costs, and
- Potential obsolescence of the equipment because of imminent technological improvements.

(Topic continued on next page)

29.1 Requirements for Lease-Purchase Analysis *(continued)*

FAR: Factors to Consider
(continued)

FAR 7.401

In addition, FAR 7.401 requires consideration of additional factors, *when appropriate*. They are:

- Availability of purchase options,
- Potential for use of the equipment by other agencies after its use by the acquiring agency has ended,
- Trade-in or salvage value,
- Imputed interest (applies to real property, not FIP), or
- Limited availability of a servicing capability for purchased equipment.

Because of the rate of advancement of technology and concurrent obsolescence of the installed base, residual or trade-in values are *not* normally calculated for FIP resources. However, regarding obsolescence, you should also be aware that the FAR provides that agencies “not rule out the purchase method of equipment acquisition in favor of leasing merely because of the possibility that future technological advances might make the selected equipment less desirable.”

FAR 7.402

Leasing may be appropriate as an interim measure or to meet short term needs. FAR 7.402 provides that if lease is justified, a lease with option to purchase is preferable. However, agencies must test this policy by comparing costs for straight lease and lease plans with ownership options based on foreseeable agency needs.

(continued on next page)

29.1 Requirements for Lease-Purchase Analysis *(continued)*

Related FIRMR Guidance

FIRMR 201-
39.5202-4(b)

Although the FIRMR does not address lease-purchase analysis *per se*, it does provide related guidelines.

For example, FIRMR 201-39.5202-4(b), *Evaluation of Options—FIP Resources*, indicates that before executing contract options, the Government will compare contract prices to “such factors as commercial or catalog prices for short-term leases.” (This refers to lease-purchase analyses performed by agencies at the end of each contract performance period to exercising contract options.)

FIRMR 201-39.1401
FIRMR 201-39.15

More significantly, FIRMR 201-39.1401, *Sealed Bidding*, requires contracting officers “to select the bid that is most advantageous to the Government considering options, acquisition methods, present value discount factors, and other price-related factors.” Even though this guidance is not repeated in FIRMR 201-39.15, *Contracting by Negotiation*, it is longstanding Federal policy to solicit all methods of acquisition unless there is a justifiable reason to eliminate a financing option from consideration.

Special Small Business Provisions

FAR 19.403(c)(2)

FAR 19.403(c)(2) authorizes the Small Business Administration’s breakout procurement center representatives to review limitations to competition resulting from agencies’ restrictions on acquisition methods. For example, a restrictive requirement might occur if the Government solicited or expressed a preference for a lease to ownership plan *and* one or more competitors are unable to finance the plan, limiting them to bidding purchase plans only and reducing their probability of award.

29.2 Lease and Purchase Methods of Acquisition

Introduction

At one time, the Government purchased most computers after they were built to one-of-a-kind specifications. This was normal in early days of computers when the Government was by far the largest (or only) customer. There were few or no computers available for lease.

Since those early years, technology has accelerated and the market has greatly diversified. Today, outright purchase is no longer the only, nor necessarily the best way, to acquire FIP resources. In fact, for some requirements, the Government's best interest may be served by leasing, rather than purchasing FIP resources.

Payment Plans

As a contracting professional, you should understand the various methods of acquiring FIP resources, whether by purchase or lease. GSA's standard solicitation document describes these methods of acquisition. Because these methods are simply different financing arrangements for FIP acquisition, *agencies must evaluate the effect of differences in financing on cost. We call this lease-purchase analysis.*

The two primary methods are *lease* and *purchase*. In purchases, title passes from the seller to the Government after installation and acceptance of equipment. In leases, the Government pays for the use of the resource but does not own it *until the conditions of the lease are met*. In some types of leases, title may or may not eventually pass to the government depending on the type of lease.

(Topic continued on next page)

29.2 Lease and Purchase Methods of Acquisition *(continued)*

Payment Plans (continued)

There are three primary types of leases: straight lease, lease with option to purchase, and lease to ownership plan. See the table below:

MOST COMMON LEASE PLANS	
Type	Description
Lease-to-ownership plan (LTOP)	Title passes to the Government after a predetermined number of lease payments. Normally agencies exercise yearly options with no obligation to continue the plan for the full term.
Lease with option to purchase (LWOP)	Agency accumulates credits while leasing which may be used to reduce purchase price. Purchase is normally restricted to predetermined times at which agencies may exercise their option to purchase.
Straight Lease	Contractor retains title throughout the system life. This is normally the most expensive method, used when there is a short-term need.

There are also hybrids of these plans. The Installment Purchase Plan (IPP) and Alternate Payment Plan (APP) are variations of LTOP. The difference is that the Government is sometimes granted “encumbered” title after installation and acceptance of equipment, with “clear” title passing after final payment based on the terms and condition of the GSA nonmandatory schedule(s). In addition, to obtain the schedule pricing, the contract specialist should be aware that the entire lease period must be covered by delivery orders regardless of the schedule period. Contractors sometimes offer a lower price in these plans since some of the risks and costs of ownership—like insurance and taxes—pass immediately upon installation and acceptance to Government. (Such costs must be considered in the lease-purchase analysis.)

In such cases, agencies need to be sure that obligations and responsibilities under the payment plan are clear. When assuming risk of loss or damage to equipment that the Government does not own outright, agencies should be sure that they have not also assumed a contingent liability in violation of the Anti-Deficiency Act. If a contractor proposes a payment plan in which title passes to your agency before payments are completed, be sure to consult your legal department.

Lease and purchase acquisition methods are described in more detail below.

29.2 Lease and Purchase Methods of Acquisition *(continued)*

Purchase

The primary method of acquisition is purchase. Outright purchase of a FIP resource is normally the lowest cost alternative when resources are needed for three years or more.

Purchase may be the only acquisition method proposed for lower cost equipment, such as printers or scanners. Purchase is also the likely solution in cases where there are unique government requirements. For example, the Government may require special security hardware (speech “scramblers”) or unique software not needed in commercial markets.

Keep in mind that the decision to purchase should not be automatic. You must consider leasing alternatives (if available) in your lease-purchase analysis.

Lease to Ownership Plans (LTOP)

The second major method of acquiring FIP resources is a *lease to ownership plan* (LTOP). In this type of payment plan, the government pays a set payment for a set term, obtaining title to the resource upon final payment. LTOP is typically used for expensive or customized FIP resources with limited market demand, such as supercomputers.

Current budget rules requires the Government’s use of LTOP to include all the following conditions:

- Payment is made in equal installments,
- The plan’s term is for a minimum of 13 months or more,
- The lease term must extend across fiscal years

When all of these conditions are met, payment can be made from agency operations and maintenance (O&M) funds.

A typical example is an expensive private branch exchange (PBX) installed by a vendor to provide telephone switching services for Government users over an extended time period. (The telecommunications company would have little incentive to remove the PBX equipment and lines for resale to another buyer.) In addition to purchase, telecommunications vendors offer a LTOP plan which allows the Government to spread the payment over a set period of time if the criteria stated above is met.

As with the other payment plans, the decision to accept an offer for a LTOP depends on a lease versus buy decision.

A LTOP plan is similar in many aspects to buying a car. Your agency pays a set number of payments after which title passes to the Government. Unlike buying a car, a piece of paper providing title to the FIP asset is not provided to the Government.

29.2 Lease and Purchase Methods of Acquisition *(continued)*

Lease With Option to Purchase (LWOP)

The *lease with option to purchase (LWOP)* is a variation of the straight lease method of acquisition. In LWOP plans, users accrue Purchase Option Credits (POC) during the lease term. If an agency opts to purchase the resource, these credits reduce the price. Based on the established contract, conversion to purchase could be only at set times during the lease period or any time during the lease. In conversion to purchase price, the contract specialist should be aware of the optimum time within the LWOP plan to convert to purchase. This optimum time will vary based on method of acquisition (open market vs. GSA nonmandatory FIP schedule) and vendor/OEM.

A vendor is usually willing to offer LWOP credits in long term leases, because all or nearly all the vendor's costs will be amortized (written off). In such cases, the vendor may have few customers and little incentive to take custody of an outdated FIP resource. The vendor can avoid disposal and handling costs by offering LWOP credits to the user.

You should realize that the vendor will rarely (if ever) offer the Government purchase option credits that accumulate to 100% of the purchase price. (That would be, in effect, an LTOP.) You will probably find that the amount of purchase option credits offered is closer to 30% of the total price.

Still, LWOP may be in the Government's best interest, especially if needs extend for longer than originally planned. Then an analysis may show that it is more cost effective to buy and continue using the resource for several more years, rather than acquiring an alternative resource at higher cost.

If an agency opts for LWOP or LTOP plans and later determines not to take title to the asset, the asset must be offered to other activities within the agency and then other agencies within the Federal government prior to returning assets to the contractor.

29.2 Lease and Purchase Methods of Acquisition *(continued)*

Straight Lease

The fourth method of acquisition is the *straight lease*. In a straight lease, the customer agrees to pay a specified amount of money at recurring intervals (normally monthly) for the use of a resource. When the customer no longer needs the resource, it reverts to the vendor.

Under straight lease, maintenance may be “bundled” in the lease price or it may be separately priced. The Government may not lease an item from one vendor and obtain maintenance from another. Both the lease price and maintenance costs must be evaluated to determine the total evaluated price. Under the present market conditions, a vendor remains fully responsible during the lease period for maintenance. If the resource fails, a vendor must replace failed items in a predetermined period of time, such as a day or two. The customer incurs no additional costs. The contractor is not liable for replacement if failure is due to negligence of the Government.

The terms of leases can vary greatly, from one day to a year or more. Generally, the longer the lease periods, the more favorable are the per-day lease rates. For example, the daily rate for a portable or notebook computer can be more than \$100 for a single day, dropping to just a few dollars per day if the customer signs a long term lease. This is because a long term lease allows the vendor to recoup investment costs and limit overhead costs, such as storage and inventory.

The straight lease method may be advantageous to the Government when there is:

- A short term requirement,
 - A national emergency requirement when immediate availability is more important than price, or
 - The Government has no interest in permanently acquiring the FIP resource.
-

(continued on next page)

29.3 Where to Obtain Pricing Information

Obtaining Pricing Information

To conduct a lease-purchase analysis, you must have current and accurate pricing information. This is easiest if you are conducting a lease-purchase analysis as part of a competitive solicitation's evaluation: prices are proposed by the offerors. If acquisition funding considerations require you to conduct a lease-purchase analysis before competition, you will need to obtain the information by other means. The same applies when you evaluate whether to renew a lease for a new option year.

Sources of Pricing Information

To obtain current pricing information, you may contact:

- *Original Equipment Manufacturers (OEMs)*. This pricing information is often available through "800" numbers.
- *Vendor marketing literature*. Many vendors, including large market outlets such as CompUSA, publish catalogs each quarter which contain updated price data. You can also obtain up-to-the-minute price data through vendors' "800" telephone numbers.
- *Other recent contracts for the same or similar items*. (When the term "recent" is used here, GSA's guidance is contracts which have been awarded within the last 3 months. This rationale is due to the ever changing prices in the marketplace.)
- *GSA non-mandatory contracts for the same or similar items*.
- *Sources sought notices in the Commerce Business Daily*.

You may want to review Chapter 16, *Market Research for Acquisition of FIP Resources*, for details on obtaining market information.

Updating Information

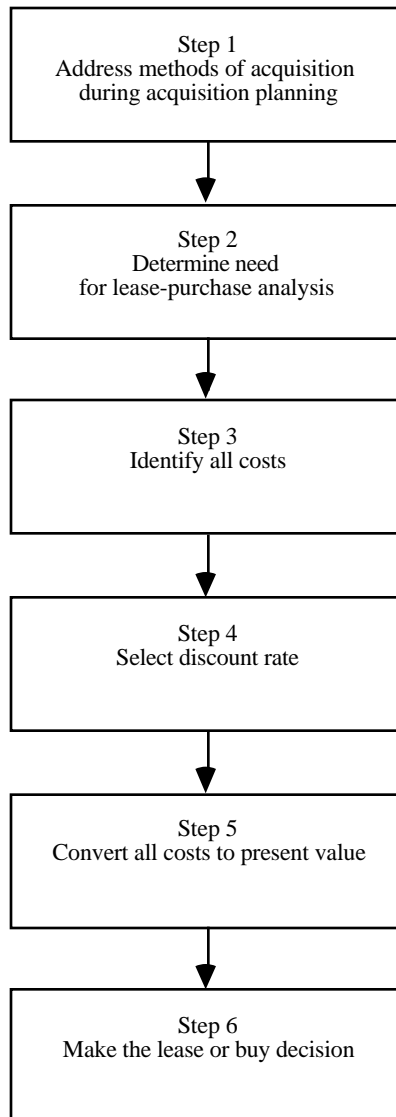
Sometimes you may have market research information that is over 3 months old. In such cases, you should check the accuracy and currency of market data, especially availability and prices, before you proceed with your lease versus buy analysis.

Our market is characterized by intense price competition for most FIP resource acquisitions, with many responsive and responsible offerors willing to compete aggressively on price. Because costs continue to fall while capability increases, conducting lease-purchase analyses regularly with current data is especially critical for FIP resources.

29.4 Steps in Lease-Purchase Analysis

Overview of Lease-Purchase Analysis

Now that you know about present value discounting and lease-purchase analysis, let's put it all together. The following flow chart shows the major steps that you should take to make a lease or buy decision. If the requiring agency or program office has performed this analysis, you should review it for accuracy, completeness, and conformance with Federal guidelines.



(continued on next page)

29.4 Steps in Lease-Purchase Analysis *(continued)*

Step 1: Address Methods of Acquisition during Acquisition Planning	<p>FAR 7.105(b)(4) requires agencies to address lease or purchase decisions as part of the contracting considerations in written acquisition plans. For example, you should determine if there are any reasons to limit your solicitation to certain payment plans—and, if so, justify the restriction. You should consider whether you will solicit or negotiate for other than purchase. Finally, you must include the evaluation of the lease-purchase as part of the proposal evaluation.</p>
Step 2: Determine Need for Lease-Purchase Analysis	<p>The next step is to determine whether you must, under the terms of OMB Circular A-94, perform a lease or buy analysis. You can use the decision table on page 29-5 to decide if OMB Circular A-94 applies. However, note that agencies may conduct a lease-purchase analysis during evaluation even though the terms of A-94 do not specifically require it.</p> <p>[Remember: You prepare the lease or buy analysis AFTER the benefit-cost analysis supports the need for a FIP resource.]</p>
Step 3: Identify All Costs	<p>To conduct a lease or buy analysis, your next step is to accurately identify all system life costs, including when they will be incurred.</p> <p>Be sure that you identify costs over the entire period that you are considering. If you omit costs, then you might make the wrong decision. Be especially watchful for costs that might be “hidden” or not readily apparent. For example, if purchasing would require recurring support by Government personnel (not required if equipment were leased), this cost must be documented and reflected in the lease versus buy analysis. Storage, shipment, and transportation costs are examples of costs that can be hidden or overlooked in a lease or buy analysis.</p> <p>If you are considering a three year life cycle, then you must compare the three year cost of leasing against the three year cost of purchasing and maintenance. (Maintenance fees are normally included in the lease rates, but not, of course, in purchase price.) A computer spreadsheet program with rows and columns can be very helpful. The table below is a <i>simplified</i> outline of three-year system life costs under three pricing options: purchase, LTOP, and straight lease.</p>

(continued on next page)

29.4 Steps in Lease-Purchase Analysis *(continued)*

Step 3: Identify
All Costs
(continued)

(Note that if transportation, installation, or other costs differ among the alternatives, you must include them in a lease-purchase analysis. In this example, note that cumulative totals are not included for the LTOP option since the government would be obligated for the full amount.)

SPREADSHEET TABLE 1					
	Day 1	Year 1	Year 2	Year 3	Total
Purchase					
Equipment	5,000,000				5,000,000
Maintenance		182,000	191,000	200,600	573,600
Totals	5,000,000	182,000	191,000	200,600	5,573,600
Cumulative Totals	5,000,000	5,182,000	5,373,000	5,573,600	
LTOP					
Lease*		2,200,000	2,200,000	2,200,000	6,600,000
Total				6,600,000	
Straight Lease					
Lease*		2,200,000	2,310,000	2,420,000	6,930,000
Cumulative Totals	0	2,200,000	4,510,000	6,930,000	
*includes maintenance					

In this case, we'll assume that the contracting officer based his prices on existing contracts or proposals. Note that the maintenance fees increase each year, accounting for the contractor's inflation projections. In the lease-to-ownership proposal, the contractor offered fixed, flat rates identical for each year. The contracting officer does *not* have to adjust these rates for inflation, because rates would be fixed under contract; risk of inflation is on the contractor, not the government.

(continued on next page)

29.4 Steps in Lease-Purchase Analysis *(continued)*

Step 4: Select the Discount Rate

The next step is to select a discount rate to use in discounting projected costs to their present values. If your agency hasn't established a discount rate, you can determine the proper discount rate by consulting the current version of the annually updated Appendix C of OMB Circular A-94. (See page 28-15 for 1994's real and nominal rates.)

As you learned in the last chapter, agencies select one of three categories of rates to use:

- 7 percent in *benefit-cost analyses* for public investments,
- Nominal interest rates, or
- Real interest rates.

You should recall that inflation is factored into *nominal interest rates*. Nominal interest rates are normally used in procurement cost evaluation, because contractors propose system life costs into which they've factored inflation. In other words, vendors propose nominal prices which you would discount with nominal rates.

Although OMB Circular A-94 does not so dictate, you will probably use nominal interest rates in lease-purchase analysis and cost evaluation. You can get assistance from your finance office or OMB's Office of Economic Policy at (202) 395-3391.

Step 5: Convert All Costs to Present Value

The next step is to convert all costs, for both lease and purchase alternatives, to their present values on an annual or monthly basis.

You now know that time and discount rates affect financial decisions. Remember that present value discounting is a technique we use to *equalize the comparison of costs that occur unequally over time*. This concept is especially important to lease-purchase and proposal evaluation. Without present value discounting, offerors could "game the system" and the government might not select the most advantageous system life offer (considering the cost of money).

(Topic continued on next page)

29.4 Steps in Lease-Purchase Analysis *(continued)*

Step 5: Convert
All Costs to
Present Value
(continued)

The table below adds present value discounting to the simplified outline shown in Step 3. In this table, 1994's three-year nominal discount rate (5%, adjusted to a mid-year rate to evaluate a consistent stream of costs) is used. In this case, the \$5,000,000 purchase price is not discounted because it represents the beginning (present value) on which the analysis is based.

SPREADSHEET TABLE 1					
	Day 1	Year 1	Year 2	Year 3	Total
Purchase					
Equipment	5,000,000				5,000,000
Maintenance		182,000	191,000	200,600	573,600
Totals	5,000,000	182,000	191,000	200,600	5,573,600
Present Value Factor	1	0.9851	0.9382	0.8936	
Present Value Total	5,000,000	179,296	179,296	179,247	5,573,839
Cumulative PV Totals	5,000,000	5,179,296	5,358,592	5,573,839	
LTOP					
Lease*		2,200,000	2,200,000	2,200,000	6,600,000
Present Value Factor	1	0.9851	0.9382	0.8936	
Present Value Total	0	2,068,800	1,970,286	1,876,463	5,915,549
Total				5,915,549	
Straight Lease					
Lease*		2,200,000	2,310,000	2,420,000	6,930,000
Present Value Factor	1	0.9851	0.9382	0.8936	
Present Value Total	0	2,167,314	2,167,314	2,162,400	6,497,028
Cumulative Totals	0	2,167,314	4,510,000	6,497,028	
*includes maintenance					

(continued on next page)

29.4 Steps in Lease-Purchase Analysis *(continued)*

Step 6: Make the
Lease or Buy
Decision

At this point, once you have calculated each option’s system life totals *discounted to their present values*, you are ready to make the lease or buy decision. An option that offers the lowest present value cost over the system’s life is the most advantageous alternative to the Government.

For example, in the table above, straight lease would be a better alternative than purchase if a system’s life of 1 or 2 years is assumed. Given a three-year system’s life, purchase is a better alternative.

However, type of money available for the acquisition is not to be a driver in selection of an acquisition methodology (purchase, LWOP, LTOP). This is dictated by the budget authority given to federal agencies by the Congress.

29.5 Contractor Leasing of ADPE

Guidance on Contractor Leasing Costs

FAR 31.205-2

There are special provisions pertaining to the allowability of leasing costs incurred by contractors and charged back to the government.

FAR 31.205-2 provides guidance on such costs.

When a contractor requests reimbursement for leasing “automatic data processing equipment” (as defined in FAR 31.001) in support of work on one or more Government contracts, the contractor must provide justification that leasing results in less overall cost to the Government. If a contractor cannot demonstrate that leasing is more advantageous, then the Government will normally pay only up to the amount that would be allowed had the contractor purchased the ADPE.

A contractor must obtain prior approval from the contracting officer to lease FIP resources when the total cost of leasing:

- is to be allocated across one or more negotiated Government contracts; or
- in a single cost center, exceeds \$500,000 per year, and 50 percent or more of the total leasing cost will be allocated to one or more negotiated Government contracts.

Documenting the Analysis

DFARS Subpart
239.73

The DFARS implement and expand on these requirements. DFARS Subpart 239.73 prescribes approval requirements for ADPE acquired under purchase or lease by contractors performing under DoD contracts.

Of particular interest in the context of this chapter are a provisions of DFARS 239.7304, which address a preference for negotiating for purchase option credits that are transferable to the Government. Also, DFARS 239.7305 requires use of a suggested format (or one “substantially similar”) for contractors to use when preparing a lease-purchase analysis. See the table below.

29.5 Contractor Leasing of ADPE *(continued)*

Documenting the
Analysis
(continued)

TABLE 39-1. SUGGESTED PURCHASE/LEASE ANALYSIS FORMAT								
ADP System								
As of								
Date								
1	2	3	4	5	6	7	8	9
ADPS Components	Qty.	Vendor	Other Avg. Monthly Rental/Lease (A) (B)	Instal. Date	Useful Life (C)	Orig. Purchase Price	Equity (D)	Current Purchase Price
(9-11 10-11)			(12+13)		(4×6)	(15-14)		
10 Vendors Purchase Price	11 Residual Value (E)	12 Owner Depreciation Costs	13 Other Costs (F)	14 Total Owner Costs	15 Total Rental/Lease Costs (G)	16 Differential (H)		
<p>(A) Includes projected extra shift where necessary.</p> <p>(B) Includes other costs (taxes, maintenance, insurance, etc.)</p> <p>(C) Documentation must be provided and attached per FAR 31.205-2.</p> <p>(D) Accrued equity on rented/leased equipment (accumulated rental credits).</p> <p>(E) Residual value forecast at end of useful life.</p> <p>(F) Includes taxes, maintenance, insurance, selling costs, lease cancellation costs, etc.</p> <p>(G) When considering annual justification for retention of existing ADPE capacity and the need to continue leasing, only the remaining rental costs to be paid under the lease should be shown.</p> <p>(H) If lease is favorable, bracket differential figures.</p>								

SUMMARY

In this chapter, you learned about the purpose of lease-purchase analysis. In the next chapter, you will learn about analyzing pricing methods to determine the lowest priced alternative.

CHAPTER 30

ANALYZING PRICING METHODS

Chapter Vignette

“I think that I understand the lease-purchase analysis,” said Mark, “but what if different offerors provide different methods or options. I imagine it can be difficult to sort out the relative price of each option, compared to all the other pricing methods. For example, what if you have many offers with different combinations of lease, LWOP, LTOP, and purchase?”

“You are right,” said Marcia, “it can be confusing. Fortunately, there are now automated commercial spreadsheet programs available to make the job much easier. You will find that most of the newer spreadsheet programs that you can use for this purpose are very user-friendly. Or, you can use the Bid Analysis Reporting System, or BARS, which was developed for this purpose some years ago. Whichever system you use, the key to success is in organizing the data that you will insert into the automated program and then correctly interpreting the outputs.”

Course Learning Objectives

At the end of this chapter, you will be able to:

Overall:

Analyze which price-related factors are likely to apply to a proposed requirement, based on the commercial spreadsheet or Bid Analysis Reporting System (BARS) calculations.

Individual:

30.1 Analyze and document each pricing method using a commercial spreadsheet or BARS to determine the lowest priced alternative.

Chapter Overview

Scope

This chapter will explain the use of commercial spreadsheets or the Bid Analysis Reporting System (BARS) in order to analyze appropriate price-related factors for determining the lowest priced alternative. This chapter presents data which requires you to calculate the lowest cost alternative in an acquisition. It is intended to:

- explain the use of either commercial spreadsheets or BARS to analyze price-related factors;
 - emphasize the importance of selecting all appropriate price-related factors for a given acquisition;
 - emphasize the importance of correctly interpreting outputs of an automated spreadsheet or BARS;
 - reinforce understanding of how present value determines purchase or lease decisions;
 - indicate whether it is necessary to perform a present value determination;
 - show whether purchase option credits will be made available;
 - show whether an acquisition fits any of the procedural or statutory exceptions;
 - show what is the lowest cost method; and
 - determine what is the most advantageous alternative, based on price-related factors.
-

Topics in This Chapter

This chapter includes the following topics:

SECTION	TITLE	PAGE
30.1	Analyzing the Price-Related Factors	30-5

Chapter Overview *(continued)*

References

In order to perform the actions discussed in this chapter, you may require access to the following references and materials:

- FAR 7.401, 15.605
- FIRMR 201-4.001, 201-39.1401, 201-39.1501-1, 201-39.1701-6, 201-20.203-2, 201-39.5202-4(b)
- DFARS 270.307
- Standard Solicitation Documents;
- the “BARS - PC Bid Analysis Reporting System Manual,” available from the General Services Administration, Information Resources Management Service, with the licensed diskette;

(Note: to be sure that you have the latest version of this diskette, contact the General Services Administration (GSA), Room 3227, 18th and F Streets, NW, Washington, DC 20405.)

- OMB Circular A-94, Guidelines and Discount Rates for Benefit-Cost Analyses of Federal Programs.
 - FIRMR Bulletin C-25.
-

30.1 Analyzing the Price-Related Factors

FIRMR Guidance on Analyzing Bids and Offers

FIRMR
201-39.1401
201-39.15
201-39.1701-6

You may recall the FIRMR advises that, before executing contract options, you should first compare contract prices to “such factors as commercial or catalog prices for short term leases.” Also, you may recall that FIRMR 201-39.1401 on sealed bidding requires contracting officers to “select the bid that is most advantageous to the Government considering options, acquisition methods, present value discount factors, and other price-related factors.” FIRMR 201-39.15 on contracting by negotiation does not provide such specific guidance on analyzing bids and offers, *but in practice most FIP resources acquisitions will require that you analyze the price-related factors to determine lowest overall cost.*

Also, FIRMR 201-39.1701-6, *Evaluation*, states that notwithstanding the language in FAR 17.206, “the contracting officer shall consider all options in the award evaluation.”

Exceptions

FIRMR 201-39.1501-2

There can be procedural and regulatory *exceptions* to the requirement for determining the lowest cost alternative. Procedurally, it may not be possible to quantify certain costs. For example, one offeror’s computer may have a great capacity for “expandability.” But, unless you can quantify or attach a dollar value to “expandability,” it is not possible to determine either the future costs or benefits of expandability. Unless you can attach a dollar amount to expandability, you cannot calculate the cost for that alternative.

There are also regulatory exceptions. FIRMR 201-39.1501-2, provides that agencies are permitted to award on the basis of the lowest offered ***purchase*** price “when:

- (a) The only acquisition method being solicited is purchase;
- (b) The purchase price of each item being acquired does not exceed \$25,000; and
- (c) The total purchase price of all the FIP resources to be included in the contract does not exceed \$300,000.”

Be careful about the \$25,000 limit. Pending changes to regulations may raise this amount to \$100,000.

There are also *exceptions in times of national emergencies and in war*. In such cases, the Government may justify purchase or straight lease without requiring consideration of other alternatives that may offer a lower overall cost.

(continued on next page)

30.1 Analyzing the Cost-Related Factors *(continued)*

Lowest Overall Cost

FIRMR 201-4.001

You may recall that FIRMR 201-4.001 explains *lowest overall cost* as follows:

Lowest overall cost means the least expenditure of funds over the system life, price and other factors considered, including, but not limited to—

- (a) Prices for the FIP resources;
- (b) The present value adjustment, if used; and
- (c) The identifiable and quantifiable costs—
 - (1) Directly related to the acquisition and use of the FIP resources;
 - (2) Of conducting the contract action; and
 - (3) Of other administrative efforts directly related to the acquisition process.

The lowest cost alternative is not necessarily the best overall value nor the most advantageous alternative to the Government. However, even if you are using a “best value” acquisition strategy, you must still determine the lowest overall cost alternative.

In order to find the lowest cost alternative, you can perform the necessary calculations and analysis manually, but it is faster and easier to perform them using a commercial spreadsheet program or the Bid Analysis Reporting System (BARS). Be aware that BARS is the standard for commercial spreadsheet programs. Commercial spreadsheets used should produce the same results!

When comparing cost-related factors of offerors who propose different options, especially on large FIP resources acquisitions, you may choose to extract cost data from the proposals and analyze the cost alternatives using a commercial spreadsheet.

What is BARS?

FIRMR Bulletin C-25

In 1981, GSA introduced the Bid Analysis and Reporting System (BARS). According to FIRMR Bulletin C-25, *BARS is an automated system designed to let you perform the present value analysis necessary to evaluate vendor proposals when contracting for FIP resources*. BARS can be used to perform several types of analyses, not just those for FIP resources acquisitions.

(continued on next page)

30.1 Analyzing the Price-Related Factors *(continued)*

Why Use BARS?

On any given FIP resources acquisition, it is possible that offerors may present several different alternatives for paying for FIP resources. This can easily happen because financing techniques may allow for payments to be made at different times and in different amounts. In some cases, there may be several alternatives and it could be difficult for you to perform present value analysis manually and to determine which alternatives would be more advantageous to the Government. In recent years, automated commercial spreadsheet programs have become very user-friendly and you can set up one of these to perform the same types of calculations done by BARS.

For example, on a single FIP resources acquisition, you might have to select the lowest overall cost from among the following alternatives:

- purchase;
- lease to purchase (LTOP);
- lease with option to purchase (LWOP);
- lease.

Commercial Spreadsheet or BARS?

It is not essential that you use BARS. BARS is designed to perform complex system life analyses, applying present value to costs, and calculating costs over a period of time to determine the lowest overall cost and most advantageous financial terms for the Government. You can now set up a spreadsheet to do the same type of calculations.

Hardware Required

You can run BARS on nearly any IBM-compatible PC with an MS-DOS operating system with a minimum of 640 K of RAM and a 3-1/2" or 5-1/4" floppy diskette drive. Check the user's manual for the hardware requirements for any commercial spreadsheet program.

Precautions

Whether you use an automated commercial spreadsheet, BARS, or manual calculations, there are two precautions that you must understand before you start:

1. You must select and analyze ALL appropriate price-related factors for the given acquisition, and
2. You must interpret the outputs of the calculations correctly.

(continued on next page)

30.1 Analyzing the Price-Related Factors *(continued)*

Select All Appropriate Price- Related Factors

Before you get started on using an automated commercial spreadsheet or BARS to analyze acquisition alternatives, make sure that you have identified and have all the price data for each alternative provided by each offeror. *Any computer analysis is only valid if you compare the full prices for all the various alternatives, under the same conditions.*

At this point in the acquisition process, price-related factors have already been identified in the acquisition plan (See Chapter 36, Price-Related Factors for FIP Resources). Also, you should have already completed any benefit-cost and present value analyses that were necessary. Be careful not to leave out a critical price-related factor. For example: (1) if you are acquiring hardware for installation in different locations, the installation in some sites may require additional transportation, site preparation costs that could have been overlooked; (2) additionally, one factor often overlooked when analyzing price-related factors is related supplies.

Comparing Prices

Be sure that you are comparing “apples against apples.” The computer or spreadsheet program cannot tell you if a price-related factor is appropriate for consideration. That requires your judgment.

(continued on next page)

30.1 Analyzing the Price-Related Factors *(continued)*

Using Present
Value

FIRMR 201-20.203-2

FIRMR 201-20, *Cost for each alternative*, requires that agencies calculate the total estimated cost for each feasible alternative, unless the anticipated cost of the acquisition is \$50,000 or less. However, as you have already learned, OMB policies supersedes the FIRMR and it is customary to do an analysis for all price-related alternatives, regardless of cost. As you have learned, this should be done in terms of constant, present value dollars, especially when you are analyzing prices for a multiple year acquisition, such as FIP maintenance services, or for lease with option to purchase, such as for a telecommunications private branch exchange (PBX).

(continued on next page)

30.1 Analyzing the Price-Related Factors *(continued)*

Organize the Data for Input in Present Value Terms

In order to minimize the risk of misunderstanding price-related factors or of omitting data, it helps to organize the data in a matrix before you begin to input the price-related data into the computer. Offerors should provide price data in accordance with the Price Schedule and pricing questionnaire from BARS or its equivalent. Both of these documents are to be incorporated into your solicitation with appropriate instructions to the offerors. Note: These are found usually in Section B of the solicitation. For example, if you are considering “maintenance” as a contract line item for one alternative, you must include it for all alternatives to which it applies. Make certain that you have not left out any contract line item numbers for any of the alternatives. Remember, the computer cannot make up for any data that you have failed to include.

If you use an automated commercial spreadsheet program, the matrix format is automatically displayed for you on the monitor screen and you simply have to “plug in” the data in the appropriate rows and columns. The following is a simple example of such a hypothetical data matrix organized for just one line item, in this case, FIP maintenance, with one base year and three option years, and the offerors proposed a five percent inflation rate. The quoted prices are extracted from the offerors' price offers.

Alternatives	Base Year	Option Year 1	Option Year 2	Option Year 3	Total Price
Alternative A	\$500,000	\$525,000	\$551, 250	\$578,813	\$2,155,063
Alternative B	\$495,000	\$519,750	\$545,736	\$574,022	\$2,134,508
Alternative C	\$490,000	\$514,500	\$540,225	\$567,236	\$2,111,961
Alternative D	\$485,000	\$509,250	\$534,713	\$561,449	\$2,090,412
Alternative E	\$480,000	\$504,000	\$529,200	\$555,660	\$2,068,860

In this simple hypothetical case, you can see that the lowest cost for maintenance appears to be offered by Offeror E, considering all prices offered. However, for a present value analysis, you would still have to first convert these prices to present value dollars.

(continued on next page)

30.1 Analyzing the Price-Related Factors *(continued)*

Organizing Data for BARS

If you use BARS, remember that it is a bit dated and not as user-friendly as the latest commercial programs. BARS requires that you first prepare the data manually on the appropriate data input sheets. BARS provides for 11 different data input sheets (GSA Forms T-825 through T-835).

Each of the 11 BARS data input pages is for a different type of data. For example, the first page is for general information needed to guide the analysis, such as the financing plans offered, evaluation period, escalation and residual value. The second page of BARS is for the information to guide the printout of the information about the Lease With Option to Purchase plan. The next group of pages are for the unit price information. The categories of unit prices in BARS are:

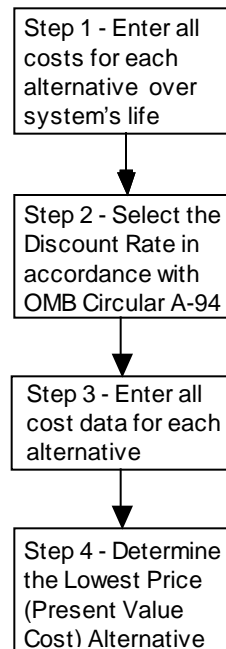
- non-recurring (regular and other);
- Purchase (recurring - regular and other);
- Maintenance;
- Environmental;
- Lease; and
- Lease to Ownership (LTOP)

The last two pages of input sheets for BARS are for purchase option credits (POCs). These describe how to determine a buyout price from the purchase price and the monthly lease rate. If you choose to use BARS, refer to the BARS manual for examples of the input sheets and instructions on completing them.

30.1 Analyzing the Price-Related Factors *(continued)*

Systematic Data Entry

Use the following steps to enter the price schedule data for each of the four acquisition alternatives. In order to avoid confusion, it helps if you do the data entry and analysis in a systematic manner either for each offeror or for each alternative. In the following examples, we have chosen to enter the data for each alternative.



Note: This process of analyzing price alternatives is the same as the process for proposal evaluation when other than purchase is solicited.

SUMMARY

In this chapter, you learned proposal evaluation using the Bid Analysis Reporting System or a commercial spreadsheet. In the next chapter, you will learn about funding for FIP resources.

CHAPTER 31

FUNDING FOR FIP RESOURCES

Chapter Vignette

“So far, except for some budgeting and funding information, we haven’t talked much about the details of financing for a FIP acquisition. How is a FIP acquisition different from any other acquisition when it comes to financing?”, asked Mark.

“Good question,” replied Marcia. There are some differences. Depending on the requirements, and results of the analysis of alternatives, there may be several ways to finance a FIP acquisition. The key is to determine the financing strategy that will be most favorable to the Government and complies with the intent of the funding sources. Certainly, you should consider the Information Technology Fund.”

Course Learning Objectives

At the end of this chapter, you will be able to:

Overall:

Choose the proper funding rule for different types of FIP resources.

Individual:

- 31.1 Identify and explain how the funding rules apply to different types of FIP resources.
- 31.2 Identify how the different types of lease and purchase methods are funded.
- 31.3 Identify the role of the Information Technology Fund.
- 31.4 Identify when multiyear contracts are in the best interest of the Government.

Chapter Overview

Scope

This chapter presents information on choosing the proper financing method for a FIP resource acquisition, including:

- how funding rules apply to different types of FIP resources;
 - how different types of lease and purchase methods are funded;
 - the role of the Information Technology Fund; and
 - the ability of agencies to award multiyear contracts under DPAs for telecommunications and how to determine when multiyear contracts are in the best interest of the Government.
-

Topics in This Chapter

This chapter includes the following topics:

SECTION	TITLE	PAGE
31.1	How Funding Rules Apply to Different Types of FIP Resources	31-4
31.2	How Lease and Purchase Methods Are Funded	31-11
31.3	The Role of the Information Technology Fund	31-16
31.4	When Multiyear Contracts Are in the Best Interest of the Government	31-17

References

In order to understand the topics in this chapter, you may require access to the following references:

- FIRMR 201-18.001, 201-18.002, 201-20.306, 201-24.102
 - DFARS 237.102, 237.106, 239.73, 239.75
 - FIRMR Bulletins C-5, C-15, C-18, C-21
-

31.1 How Funding Rules Apply to Different Types of FIP Resources

Introduction

This section discusses how the funding rules apply to different types of FIP resources. Regardless of the type of FIP resource to be acquired, the funding must be supported by :

- choosing the proper period of availability;
- the proper rate of obligation; and
- proper authorization.

At this point in the presolicitation process, the technical requirements have been established; the technical specifications and essential delivery dates have been established; the requirements analysis has been completed; the analysis of alternatives has selected the most advantageous technical and acquisition options for the Government and benefit-cost analyses and present value analyses have been completed.

At this point, you are nearly ready to complete the acquisition strategy and the acquisition plan. One of your responsibilities as a contract specialist may be to review a proposed FIP resource acquisition and recommend the options for funding that acquisition. The method of funding you use will depend on the type of requirement.

Financed versus Unfinanced Requirements

You may recall from Chapter 20 (Planning and Budgeting for FIP Resources) that, regardless of the type of FIP acquisition, requirements must be approved at each level before they are forwarded to Congress for approval and funding. In other words, the requirements must be clearly explained and precede the funding.

Congress will review each requirement which it receives and determine if the requirement will be:

- “*Financed*” - in which case funds will be set aside in the budget to support that acquisition, or
 - “*Unfinanced*” - funds will NOT be set aside in the budget, regardless of the technical merits of the requirement.
-

31.1 How Funding Rules Apply to Different Types of FIP Resources

(continued)

Approved &
Funded vs.
Approved &
Unfunded

You will also recall that even if Congress approves of a requirement, it may not choose to provide the funds for that requirement, so a planned acquisition can be “approved and funded” or “approved and unfunded.” *As far as you are concerned, you may not proceed with a FIP resources acquisition unless a requirement is both “approved” and “funded.”*

However, even if a requirement is approved and funded, the money may be placed in any one of several different funds, and it may be your responsibility as a contract specialist to find out which fund is appropriate for a given acquisition.

General Types of
Funds Provided

There are several general types of funds which might be used to finance a given FIP resource acquisition. These various funds are intended and appropriated by Congress to be used for different purposes and include:

1. Procurement funds
 2. Operation and Maintenance (O&M) funds
 3. Research and Development (R&D) funds
 4. Stock fund
 5. Revolving funds
 6. Non-appropriated funds
-

Procurement
Funds

The first type of fund which you may be able to use for a FIP acquisition is procurement funds. These are funds which are intended by Congress to be used for approved requirements on a one-time, non-recurring basis. This type of funding is provided *specifically for a certain acquisition*. Procurement funds are usually appropriate for a large scale, nonrecurring, FIP resource acquisition that is essential for the agency’s mission.

For example, an agency might require acquisition of a large LAN with dozens of workstations to open a new office. In this case, one-time procurement funding would be appropriate to obtain the LAN, including all components. Thereafter, as LAN parts and components wear out or require replacement, procurement funding might **not** be appropriate. Instead the O&M fund or other fund sources might be used.

However, after several years, when it is time again to replace the entire LAN, procurement funding might again be used.

(continued on next page)

31.1 How Funding Rules Apply to Different Types of FIP Resources

(continued)

Operation and Maintenance Funds

The second type of funding which you may be able to use for FIP resource acquisition is operation and maintenance (O&M) funding. Congress intends that O&M funds are more appropriate to cover the normal, recurring, mission-related operations of an agency or program office, including FIP services and FIP support services, such as daily operation and maintenance.

In order to use O&M funds, agencies are expected to forecast their monthly, quarterly, and year-to-year FIP resource requirements with a high degree of accuracy. For example, if an agency expects to lease 1,000 hours of contractor FIP services or requires 1,000 labor-hours of contractor maintenance support each year, these requirements should be met by the O&M budget.

As a contract specialist, you should be alert to the inappropriate use of O&M funds to acquire FIP systems. For example, it is usually not appropriate to use O&M funds to acquire a large LAN system in a piecemeal manner, buying a few computers at a time, and linking them together.

Research and Development Funds

A third type of funding which may be available for FIP resource acquisition is research and development (R&D) funding. This type of funding may be appropriate in those cases where the planned acquisition will clearly require specialized FIP resources which are not generally available from market sources, or will be required to support an authorized research and development project.

Certain Government requirements, such as advanced weather forecasting, atomic energy research and advanced aircraft design may be so specialized that there are simply no items available on the market to satisfy the requirements. In such cases, the only alternative may be to develop a one-of-a-kind FIP resource to Government specifications.

DFARS 232.702, 232.703-1

For DoD projects, DFARS 232.702 requires that fixed price contracts be fully funded, except for those exceptions allowed by DFARS 232.703-1, which allows incremental funding for fixed price contracts paid for with research and development appropriations.

As a contract specialist, your responsibility might be to determine whether allocated research and development funding is appropriate for a given acquisition.

31.1 How Funding Rules Apply to Different Types of FIP Resources

(continued)

Stock Funds

Stock funds are another type of fund which may be appropriate for a given FIP resource acquisition. The concept behind a stock fund is that the Government appropriates funding for purchase of a stock, or selected quantity of items. These items are often made to certain Government specifications and then stored (usually in Government warehouses or depots) and may be acquired only by an authorized requester to meet special agency requirements. Stock funded items are often not available as commercial off-the-shelf items and may be made in limited quantities. Stock-funded items are sometimes expensive and/or restricted to certain authorized uses. For example, certain communications security (COMSEC) devices which “scramble” voice telephone transmissions are an example of a stock-funded item for acquisition by military organizations authorized to use them.

As a contract specialist, you may be concerned about making sure that a requirement for acquisition of a stock-funded item is *authorized*. Not everyone is authorized to acquire certain stock-funded items and there is usually a limit on the number of items which even an authorized user may acquire. The key here is checking the authorization and stock funding authority to acquire a stock-funded item.

Revolving Funds

A *revolving fund* is a special category of fund which may be used for certain FIP resources acquisitions. As you may already know, a revolving fund is a “self-replenishing” or “self-supporting” fund. The intent of Congress is that the users of the fund’s assets will replenish the fund, with the money they pay for the acquired items. This allows other users to draw on those assets and keep the fund at a certain level so that use can continue indefinitely. Therefore, when Congress approves such a fund, it should be necessary to appropriate money to “fill” the fund only once. Thereafter, the fund will continue to operate with no additional appropriations from Congress.

The *Information Technology Fund* (ITF) operated by GSA is an example of a revolving fund.

Defense Business Operating Fund

The Defense Business Operating Fund (DBOF) is a revolving fund which can be used by authorized defense agencies to acquire FIP resources. Basically, the DBOF consolidated several of the separate stock funds and industrial funds operated by the various services into one consolidated revolving fund under the office of the Comptroller in the Department of Defense.

(continued on next page)

31.1 How Funding Rules Apply to Different Types of FIP Resources

(continued)

Non-Appropriated Funds

Most of the funds that you will use for acquisition of FIP resources are appropriated on a recurring basis by Congress. For example, operation and maintenance funds must be appropriated for each agency each year. However, some funds are said to be “*non-appropriated*.” Non-appropriated funds are a category of funds which are NOT appropriated on a recurring basis. In this respect, they are similar to a revolving fund in that they are expected to be self-supporting and self-replenishing, once they have been established.

Non-appropriated funds operate under established regulations which specify authorized and unauthorized purchases. For example, some non-appropriated funds in DoD are established for troop morale and welfare, such as for bowling alleys, clubs, hobby shops, and similar activities. In some cases, it is possible to use these non-appropriated funds to acquire FIP resources, so long as the FIP resource will be funded solely by, and used solely for, the support of the non-appropriated fund activities. An example might be a computer to maintain record keeping of the fund activities.

If an agency expects to use non-appropriated funding to support a FIP resource acquisition, your responsibility will be to ensure that the planned expenditure is authorized by the regulations which govern the particular appropriated fund.

Unique Funding Requirements That Apply to FIP

Acquisition of FIP resources includes some unique funding considerations. For example, FIP resources acquisitions are funded from a variety of available sources, such as the *Information Technology Fund*.

However, as a contract specialist, you should be aware that the selection of the proper source of funding will depend on the type and details of the FIP resource acquisition.

Even if funding is available for the planned acquisition, you must also make sure that the funding is appropriate and that certain conditions apply. These conditions include the:

- rate of availability; and
 - rate of obligation
-

31.1 How Funding Rules Apply to Different Types of FIP Resources

(continued)

Choosing the Proper Rate of Availability

One of your responsibilities may be to choose the proper *rate of availability* for funding. Not all fund sources are equally available throughout the year. For example, late in the year, some operating and maintenance funds may be nearly depleted, so it would not be legal for you to use these funds for a FIP resources acquisition without overspending. This would be a violation of the Anti-Deficiency Act.

Therefore, even if a requirement has been approved and funded, you must make sure that funding will still be available in the appropriate time period to support the acquisition. This may be especially true of acquisitions which are to be supported by operating and maintenance funds, such as maintenance services or equipment leases late in the fiscal year.

Also, remember that you cannot legally commit or obligate funds in advance just because you “expect the funding to be approved.” For example, suppose a program office wanted to “prevent interruption of FIP maintenance services until next year’s budget allocation is received,” you should still not obligate non-existent O&M funds for that purpose, even if you fully expected funding would become available.

FIP Support Service Contracts

FIP support service contracts are often used for the maintenance of computers and associated hardware. However, you must be certain that the funding and type of contract are appropriate for such requirements.

For example, it may be appropriate to finance the first year of maintenance as part of an acquisition of new FIP equipment. However, after FIP equipment has been installed beyond the first year, you should normally rely on operating and maintenance funds for the acquisition of FIP support services on the installed FIP equipment. Operating and maintenance funds are intended for service contracts and are funded by annual appropriations.

DFARS 237.102, & 237.106

Also, whenever possible, you should acquire such FIP service contracts on the basis of the *tasks to be performed, rather than the basis of the number of hours to be provided*. Therefore, whenever possible, you should avoid time and materials (T & M) contracts for FIP support services.

31.1 How Funding Rules Apply to Different Types of FIP Resources

(continued)

Choosing the Rate of Obligation

You must also check the *rate of obligation*, because the rate at which available funds will be obligated may also be a concern. Again, you are not authorized to spend funds which you do not have. One way that this can happen is if authorized funds are obligated at a rate faster than planned. This can lead to over-obligating funds in a certain time period, such as the last quarter of the fiscal year.

For example, suppose an agency has a T&M contract for FIP support services. Let us say the agency planned to expend \$100,000 per month, but finds that, in the last quarter, it is spending \$150,000 per month. In this case, the rate of obligation is clearly higher than expected and the available, authorized funding may be used up too soon or the authorized level will be exceeded.

For this reason you must choose a rate of obligation that will not use up the available funding too soon.

Acquisition of ADPE by DoD Contractors

One unique requirement concerns the acquisition of automatic data processing equipment (ADPE or FIP equipment) by DoD contractors, whether leased or purchased. In some cases, DoD contractors must acquire FIP equipment in order to perform tasks on one or more DoD contracts. The contractor may charge the full cost of the FIP equipment to the Government and the title to the equipment will pass to the Government upon completion of work.

A DoD contractor may also enter into a lease with option to purchase (LWOP) agreement. In this case, you can require that the rental contract be structured to allow purchase option credits to accrue to the Government.

DFARS 239.73

In all cases where a DoD contractor is required to lease or purchase FIP equipment (hardware), you should check DFARS 239.73. It prescribes approval requirements and procedures you should follow, and the documentation you will require. It includes a requirement that such requests for acquisition of FIP equipment be screened by the Defense Automation Resources Information Center (DARIC).

31.2 How Lease and Purchase Methods Are Funded

Types of Leasing and Purchasing

You may recall that in most acquisitions, you must make a lease or purchase decision. (See Chapter 29 for information on lease versus purchase for FIP resources.) That is, based on the available alternatives, you can opt to acquire a FIP resource either through purchase, or lease or both.

This section discusses the funding for each of the various lease or purchase options. You will recall that there are four basic methods to acquire FIP resources:

1. Purchase;
2. Lease With Option to Purchase (LWOP);
3. Lease to Ownership Plan (LTOP); and
4. Straight Lease.

Depending on the conditions of the acquisition, different types of funding may be used for these methods.

Funding for Straight Leasing

Straight leasing is often done on a short term basis, usually less than a year, and sometimes on an emergency basis. Typically, straight leasing is used for relatively low cost acquisitions of FIP resources. For these reasons, *straight leasing is usually paid for by the agency's operations and maintenance fund*. It is usually possible for the agency or program office to forecast sufficient O&M funding to cover any straight leasing requirements which may arise.

Funding for Contractor Leasing

However, in those cases where a contractor intends to lease FIP resources, O&M funding may not be appropriate. Instead, the cost of the contract, including contractor leasing, should usually be part of approved procurement funding.

Funding for LWOP

A second basic method of acquisition is Lease With Option to Purchase (LWOP). This method is sometimes used for relatively long term acquisitions, often more than one year, or when an agency can identify a long term requirement, such as several years. In such cases, it may be appropriate to *plan on using O&M funding* if the lease period will exceed more than one year, and if the accrual of credits toward purchase makes the purchase advantageous. Of course, the decision will depend on your lease versus purchase analysis.

31.2 How Lease and Purchase Methods Are Funded *(continued)*

Funding for LTOP

The third basic method of acquisition is the Lease to Ownership Plan or LTOP. The LTOP requires that the lease payment meet several conditions:

- Lease payments must be made in equal installments;
- For a MINIMUM period of 13 months; AND
- Extend across fiscal years.

FIRMR Bulletin C-21

Under these conditions, the acquisition is drawn out over time and the costs are very predictable so *LTOP is usually paid out of the agency's O&M funding*. The GSA has made LTOP available for acquisition of relatively expensive telecommunications equipment, such as a private branch exchange (PBX). For additional information, see FIRMR Bulletin C-21.

Funding for Purchases

FIRMR 201-18.001

Funding for purchases is available from several sources, depending on certain conditions including costs and agency rules. *The funding for most FIP resources, especially hardware, results from the planning and budgeting that agencies do as required by FIRMR 201-18.001 and OMB Circular A-130.* This budgeting and planning establishes the long term justification for procurement funding that agencies need to meet requirements for FIP acquisitions each year. So, most of the time that you are looking for justification for a FIP resource acquisition, you should find that justification in the updated five year plan, and the money for this year's acquisitions should be in the current year budget.

DFARS 239.75

Although some DoD FIP resources can be acquired from O&M funding, so-called *Major Information Systems* require special oversight reviews and must be specifically funded within DoD (DFARS 239.75).

For example, under the Defense Appropriations Act, special oversight reviews must be completed for any major information system which:

- has anticipated program costs in excess of \$100 million; or
 - has estimated program costs of more than \$25 million in any single year; or
 - is designated as being of special interest by the Office of the Secretary of Defense.
-

(continued on next page)

31.2 How Lease and Purchase Methods Are Funded_(continued)

Funds Not the “Driver” for Acquisition

One common misconception concerning financing of FIP resources is the continuing belief that funds are the key factor or “driver” in determining which FIP resources are to be procured. In fact, as explained by congressional reports, *the requirement, NOT funding, is the “driver” in FIP resources acquisition.*

In other words, even if funding, such as O&M funding, is known to be available and sufficient, you should not obligate or spend the funds unless the requirement has been approved and all alternatives considered. It is important that the requirement be fully justified in order to obtain the appropriate level of funding for acquisition.

Remember, the type of funding that you will choose will depend on the results of the requirements analysis and the analysis of alternatives.

For example, if the requirements analysis determined that an agency had an urgent requirement to obtain speech security equipment (voice “scramblers”) to safeguard voice telephone transmissions, this acquisition might be funded from stock funds.

On the other hand, if the requirement was for a continuing level of contractor maintenance of installed computers, this requirement would properly be funded by the O&M funds.

(continued on next page)

31.2 How Lease and Purchase Methods Are Funded *(continued)*

Current Year Appropriations

The first factor that you must consider in a FIP resources acquisition is *current year appropriations*. In other words, you must answer the question, “Do we have the money to cover this acquisition this year?” If the answer is “No,” then you cannot proceed with the obligation until the appropriate funds are available. **Remember, you may not spend funds that are not available.**

Switching Funds

Also, you may not switch funding from one fund to another in order to cover the cost of an acquisition. For example, if funding has been appropriated solely to obtain computers for support of research and development, you cannot use that funding to support the acquisition of maintenance services which should be properly covered under the O&M budget.

Possible Application of Commercial Financing Methods

One factor that you may investigate for funding of a FIP acquisition is the possible application of commercial financing methods. For example, some original equipment manufacturers (OEMs) may offer favorable terms, such as lower rates for larger purchases of FIP resources, or rebates. Since the Government always tries to obtain the best possible terms and conditions, you should ask about any special commercial financing incentives which may offer the Government a favorable alternative.

However, make sure that any commercial financing terms do not otherwise violate Government regulations.

(continued on next page)

31.2 How Lease and Purchase Methods Are Funded *(continued)*

Trade-in Versus Reutilization

Finally, the third factor that you should consider is trade-in versus reutilization. In some cases, you may be able to trade used FIP equipment back in to the original manufacturer or vendor, for credits against acquisition of newer or replacement items, if you have negotiated for trade-in at the time the original purchase contract was signed.

For example, as FIP equipment nears the end of its life cycle, you may have to help decide whether it is more advantageous to reutilize the equipment within the agency or to use trade-in credits against the purchase of newer equipment.

It is recommended that the specific trade-in values be negotiated and established prior to signing the contract. You can still attempt to negotiate for better terms later, prior to actual trade-in.

Trade-in may be a useful strategy if you expect very early obsolescence due to rapid advances in technology. However, you must be careful not to “lock in” to one vendor or supplier. On the other hand, even if FIP equipment becomes obsolete quickly, it may be advantageous to reutilize that equipment somewhere else in the agency.

Consider the following advantages and disadvantages when thinking about using a trade-in strategy.

TRADE-IN STRATEGY	
ADVANTAGES	DISADVANTAGES
<ul style="list-style-type: none"> Allows for constant upgrades, especially if frequent technology changes cause obsolescence Establishes value of trade-in credits in advance, but still allows Government a chance to negotiate for better terms prior to trade-in 	<p>Danger of “locking-in” one vendor or supplier for too long and curbing competition</p>

31.3 The Role of the Information Technology Fund

The Role of the Information Technology Fund

The Information Technology Fund (ITF) is a special kind of revolving fund established under the Paperwork Reduction Reauthorization Act of 1987. The GSA's Office of Technology Assistance (OTA) manages this fund as part of its role in assisting other agencies in the acquisition of FIP resources. An agency must reimburse the fund for any expenditures.

For example, if you need assistance in designing and installing a large Local Area Network system or other complex acquisition, your agency can sign a Memorandum of Understanding or Interagency Agreement with the OTA. That office will use the Information Technology Fund to provide expertise in such areas as system analysis, system design, acquisition planning, and other such acquisition consulting activities.

The ITF may even be used to acquire certain components of a system, such as servers, which are not available on GSA schedules, as long as the equipment is only a minor part of a major system. However, the ITF is not intended to be used primarily as a "backdoor source" for acquiring FIP hardware.

For example, if you are acquiring a LAN, the OTA might suggest certain servers and acquire them as a part of the consulting activities, but the ITF would not be used to purchase items, such as terminals or workstations, which are available on the GSA Schedules. The agency would purchase these items directly from the Schedules, using its own funding.

Of course, since this is a revolving fund, the requiring agency must reimburse the fund for any expenditures, such as system design costs, or any other expenditures.

For more information about the Information Technology Fund, contact the General Services Administration (KXMA) at (202) 501-1183.

31.4 When Multiyear Contracts Are in the Best Interest of the Government

Multiyear Contracts

There may be times when you will find that it is in the best interests of the Government to enter into a *multiyear contract* for FIP resources, especially for telecommunications.

Telecommunications services do not lend themselves to frequent or constant solicitations for new offers, because that might disrupt the agency's mission or work flow. It is clearly not in the Government's best interest to rebid every single year and risk disrupting telephone service, or requiring a contractor to remove large amounts of installed switching equipment every year. Also, the Government can often obtain more favorable terms, including lower prices, for a multiyear contract.

For these reasons, GSA has made it possible for an agency to award a multiyear contract for telecommunications. However, if you are considering a multiyear contract, make sure that the Agency Procurement Request (APR) specifically requests multiyear contracting authority and explains the estimated contract life and cost. Also, the GSA's Delegation of Procurement Authority to the requesting agency must provide such specific multiyear contracting authority. Check FIRMR Bulletin C-5.

Conditions for Multiyear Telecommuni- cations Contracts

FIRMR 201-20.306

FIRMR 201-20.306 specifically authorizes agencies to enter into multiyear contracts for telecommunications contracts when the following conditions are met:

1. the agency has a delegation of GSA's procurement authority;
2. the contract life, with options, will not exceed ten years; and
3. the agency complies with OMB budget and accounting procedures for appropriated funds.

31.4 When Multiyear Contracts Are in the Best Interest of the Government *(continued)*

Advantages and Disadvantages of Multiyear Contracts
(continued)

There are both advantages and disadvantages to multiyear contracts for a FIP resource acquisition. As a contract specialist, you should understand these and be able to make recommendations as to whether a multiyear contract is in the Government's best interest. The following table summarizes these advantages and disadvantages.

ADVANTAGES AND DISADVANTAGES OF MULTIYEAR CONTRACTS FOR FIP RESOURCES	
Advantages...	<ul style="list-style-type: none"> • Reduces the risk of interrupted or degraded services, especially for installed equipment such as telephone switching facilities. • Usually easier to administer over time, because the terms, conditions and personnel remain the same over a longer period. • Allows the Government to more accurately document the contractor's performance ("track record") over time, in those cases where past performance is important. • May allow the Government to negotiate more favorable terms over a longer period, such as use of options.
Disadvantages...	<ul style="list-style-type: none"> • Added risk that innovation, new approaches or new technology will be delayed, since the contractor has less incentive to innovate. • May reduce competition over the long run, since the incumbent contractor will develop competitive advantage (experience) over possible competitors. • May be more difficult to terminate for convenience of the Government because of the risk of interrupted service.

31.4 When Multiyear Contracts Are in the Best Interest of the Government *(continued)*

Advantages and
Disadvantages of
Multiyear
Contracts
(continued)

Of course, the weight and importance that the agency may give to each advantage or disadvantage will differ, according to the specific acquisition. For example, in some cases, the dangers of interrupted service may be so important that this will outweigh all possible disadvantages and a multiyear contract will be the only sensible option.

Long Term
Leasing

One common example of multiyear contracting is the use of long term leasing, particularly for telecommunications services. You will recall that many telecommunications sources are mandatory for use. Other telecommunications sources are mandatory for consideration, and the contracts and funding are already in place.

FIRMR 201-24.102 FIRMR Bulletin C-18

For example, FIRMR 201-24.102 requires agencies to use available consolidated local telecommunications services at certain designated locations. (Bulletin C-15 explains mandatory local telecommunications service in detail.) FTS 2000, for long term leasing of telecommunications services only, is another example of a long term contract, already in place, for which funding is established. (See FIRMR Bulletin C-18.)

Responsibilities of
the Contract
Specialist

Regardless of the type of financing that will eventually be selected, as a contract specialist, you must understand the types of funds available for FIP resources acquisitions and be able to advise personnel as to whether or not a specific type of funding is suitable for funding a given acquisition.

SUMMARY

In this chapter, you learned to choose the proper funding method for FIP resources. In the next chapter, you will learn how to analyze specifications for FIP resources acquisitions.

CHAPTER 32

ANALYZE SPECIFICATIONS FOR FIP RESOURCES ACQUISITION

Chapter Vignette

“I see that the Government must be really careful in acquiring FIP resources. It must be easy to make a mistake if you haven’t done the market research and considered possible obsolescence. I guess the key is developing the Statement of Work and specifications and applying the correct standards very carefully.”

“You are exactly right,” replied Marcia. “Of course, you should develop the SOW and specs carefully in any acquisition, but they are crucial in a FIP resources acquisition. There are some real horror stories in Government computer buys, but some specs have really withstood the test of time. You do need to know the strengths and weaknesses of these specs and when to use them.”

Course Learning Objectives

At the end of this chapter, you will be able to:

Overall:

Show the types of specifications that are typically used in FIP resource acquisitions and, for each type, describe the strengths, weaknesses, and conditions of use, including functional performance, design requirements, compatibility-limited, brand name or equal, and specific make and model.

Individual:

- 32.1 Review the definition of a specification.
- 32.2 Demonstrate the types of specifications that are typically used in FIP resource acquisitions and for each describe the strengths, weaknesses, and conditions of use.
- 32.3 Explain the term compatibility-limited in accordance with FIRMR and predict the impact on documentation requirements for compatibility-limited requirements.
- 32.4 Distinguish the differences among a specification, a standard and SOW.

Chapter Overview

Scope

This chapter provides an the analysis of specifications for FIP resource acquisitions. The analysis of specifications is a critical part of the acquisition process.

If the requiring agency does not select or develop the appropriate specifications and standards for a FIP resource acquisition, the risk of a faulty solicitation increases. As a result, the Government may not obtain the required FIP resources, and there may be a protest later.

You will find that, it is preferable to use specifications that have stood the test of time in FIP resource acquisitions. Specifications have certain strengths, weaknesses and appropriate use in any given acquisition.

Specifications that you decide to use will depend on the specific requirements of the FIP resource acquisition. It may be appropriate for you to use either *functional specifications*, *performance specifications*, *design specifications*, or *a combination of these*. If necessary, you may also have to *justify compatibility-limited specifications*.

References

In order to understand the topics in this chapter, you may require access to the following references:

- FAR Part 10, especially 10.001, 10.002(a)(4), 10.004(a)(1) and 10.006;
 - FIRMR, especially 201-20.103-4, 201-20.2, 201-4.001, 201-20.103-4, 201-20.303;
 - OMB Circular A-119, *Federal Participation in Development and Use of Voluntary Standards*
 - DFARS, especially 210-7000; and
 - Military Handbook 245C
 - GSA Index of Federal Specifications, Standards and Commercial Item Descriptions;
 - DoD Index of Specifications and Standards (DODISS);
-

(continued on next page)

Chapter Overview *(continued)*

Topics Covered in
this Chapter

This chapter includes the following topics:

SECTION	TITLE	PAGE
32.1	Definitions of Specifications	32-5
32.2	Differences Among Types of Specifications	32-9
32.3	Documentation for Compatibility-Limited Requirements	32-11
32.4	Differences among a Specification, a Standard and a SOW	32-14

32.1 Definitions

Common Definitions

In order to understand the topics in this chapter, you should know and refer to the common definitions below.

FAR 10.001

Specification—a description of the technical requirements for a material, product, or service that includes the criteria for determining whether these requirements are met. Specifications shall state only the Government’s minimum needs and be designed to promote full and open competition, with due regard to the nature of the supplies or services to be acquired.

FAR 10.001

Standard—a document that establishes engineering and technical limitations and applications of items, materials, processes, methods, designs, and engineering practices. It includes any related criteria deemed essential to achieve the highest practical degree of uniformity in materials or products, or interchangeability of parts used in those products. Standards may be used in specifications, invitations for bids, requests for proposals, and contracts.

FAR 10.001

Federal specification or standard—a specification or standard issued or controlled by the General Services Administration and listed in the GSA Index of Federal Specifications Standards, and Commercial Item Descriptions.

MIL-HDBK-245C

Statement of Work—a form of specification used in setting forth a requirement for services or work which describes the work or services to be performed, explains the methods to be used, and identifies the products to be acquired.

FIRMR 201-4.001

Compatibility-Limited Specification —a statement of FIP resources requirements expressed in terms that *require the items to be compatible with existing FIP resources*.

FAR 10.001

Brand Name Description —means a purchase description that identifies a product by its brand name and model or part number or other appropriate nomenclature by which the product is offered for sale.

FIRMR 201-4.001

Specific Make and Model—a description of the Government’s requirement for FIP resources that is so restrictive that *only a particular manufacturer’s products will satisfy the Government’s needs*, regardless of the number of suppliers that may be able to furnish that manufacturer’s products.

FAR 10.001

General Services Administration Index of Federal Specifications, Standards and Commercial Item Descriptions—the GSA publication that lists Federal specifications and standards, including supplements, that have been implemented for use by all agencies.

FAR 10.001

Department of Defense Index of Specifications and Standards (DODISS)—the DOD publication that lists unclassified Federal and military specifications and standards, related standardization documents, and voluntary standards approved for use by DOD.

(continued on next page)

32.1 Definitions *(continued)*

Types of Specifications

The types of specifications which may be used by an agency to describe a FIP resource requirements may be:

- functional
- performance
- design
- combination
- compatibility-limited
- specific make and model

Functional Specifications

Functional specifications are those which identify the functions to be performed.

For example, Attachment A, of FIRMR Bulletin C-8 (Information Accessibility for Employees with Disabilities) contains functional specifications you can use when acquiring FIP equipment to be used by employees with disabilities. One example concerns color presentation:

“When colors must be distinguished in order to understand information on the display, color-blind end users should be provided with a means of selecting the colors to be displayed.”

You can see that this tells the offeror what goal must be attained, without over-specifying how it is to be attained.

Hardware Example of Functional Specification

You might also require a functional specification for hardware. For example, you may wish to specify a “keyguard” to assist a motor-disabled user to stabilize movements and ensure the right keys are depressed on a computer keyboard. (A keyguard is a keyboard template with holes corresponding to the location of the keys.) In this case, the functional specification for the hardware (the keyguard) might look like this:

“The contractor shall provide a keyguard for each keyboard in order to enable a motor-disabled user to stabilize movements and ensure that the intended key is pressed.”

32.1 Definitions *(continued)*

Performance Specifications

Performance specifications require an item to meet certain performance terms, such as time to complete a given function or process. Performance specifications include factors such as:

- throughput
- record file sizes and characteristics
- printer input/output volumes and speeds
- terminal volumes and response times

For example, a performance specification for a laser printer may be the capability to print 52 pages a minute.

You can see that performance specifications give the offerors more leeway than a design specification or a specific make and model.

Design Specifications

The requiring agency may utilize a *design specifications* when FIP resources are defined by the Government such as: screen size can be no greater than 15 inches and/or weight cannot exceed 10 lbs. Design specifications can be quite restrictive.

Combination Specifications

Of course, some FIP resource acquisitions may include a combination of any and/or all specifications.

For example, you could have a combination specification for a printer that prints 1000 pages per minute but the footprint (size) cannot exceed 24 by 36 inches utilizing normal office power sources.

Compatibility-Limited Specifications

Compatibility-limited specifications are restrictive. They require the offeror to provide an item that is compatible with existing FIP resources. For example, you might use a compatibility-limited specifications to require that “workstations provided shall be compatible with the installed AIX version of the UNIX system.” Compatibility limited specifications must be justified in accordance with FIRMR 201-4.001.

(continued on next page)

32.1 Definitions *(continued)*

Specific Make and
Model
Specifications

Specific Make and Model specifications are the most restrictive type of specifications that only a particular manufacturer's product will satisfy the Government's needs, regardless of the number of suppliers that may be able to furnish that manufacturer's products. For example, you might specify that:

"The only large capacity optical storage devices acceptable will be the Model 123 devices manufactured by the XYZ Corporation."

You can see that a specific make and model specification is extremely restrictive and reduces competition. You should, therefore, be very careful about requiring a specific make and model specification. A justification and approval is required for this type of specification.

32.2 Differences Among Types of Specifications

FAR Part 10 Guidance on Specifications

FAR Part 10.004 (a)(1)

FAR Part 10.004 (a)(1) provides the general guidance on use of specifications. It explains that in selecting specifications or descriptions for use, you should:

- State only the Government’s *actual minimum needs*;
- Cite applicable specifications and standards;
- “Selectively” apply and “tailor” specifications and standards to meet the particular acquisition;
- Avoid using “specific make and model” provided by only one manufacturer. (*However, you may specify “brand name” or “equal, plus salient characteristics, to qualify as a competitive acquisition”*)

Strengths, Weaknesses and Conditions of Use

The following table summarizes the strength, weakness and condition of use for the various types of specifications.

Using Design and Performance Specifications			
Type	Strength	Weakness	Conditions
Functional Specifications	Promote innovation and competition	Require great care to ensure all requirements are “spelled out”	Preferred type; Use whenever possible
Performance Specifications	Promote innovation and competition	Must be carefully tailored	Useful when time and speed requirements are a consideration
Design Specifications	Useful for ensuring compatibility or limiting size	May unduly restrict innovation	Useful when you require FIP resources already defined by Government design features, such as a maximum size.
Combination Specifications	Can combine best features and strengths of specifications	Can be very difficult to write	Use when necessary to combine strengths of various specifications; often used for software
Compatibility Specifications	Very specific. Ensure compatibility with existing FIP resources	May restrict innovation; require justification	Use when compatibility is essential and require justification
Specific Make and Model	Very specific; little chance of misunderstanding	Extremely restrictive; inhibits competition; may require extensive justification	Use only when absolutely necessary; ensure it is fully justified. Consider “brand name or equal,” if possible alternative.

32.2 Differences Among Types of Specifications *(continued)*

Selecting Specifications

Specifications to be used will usually be selected by the technical personnel in the requiring agency. However, you must be aware that they may select improper, incomplete or inappropriate specifications and you may have to recommend that the agency revise the specifications for the acquisition.

It is the responsibility of the contracting personnel to ensure that the specifications utilized:

- Do NOT unnecessarily restrict competition, and
 - Are justified.
-

32.3 Documentation for Compatibility-Limited Requirements

Introduction

FIRMR 201-4.001

This section discusses documentation for compatibility-limited requirements. You will recall that a compatibility-limited requirement is one which must be compatible with existing FIP resources (FIRMR 201-4.001). Most activities and program offices already have large quantities of FIP resources installed, so you can understand why they must be concerned that new FIP resources are compatible with those on hand.

Documentation for Compatibility- Limited Requirements

*The problem with a compatibility-limited specification is that it may unnecessarily restrict competition. **Therefore, it must be fully justified.***

A requiring agency may submit a compatibility-limited specification when there is a need for a FIP resource which must work with, connect to, or utilize an existing FIP resource. When this happens, you should review the justification carefully to be sure it fully supports the compatibility-limited requirement. Remember, the justification must come from the user, and include as a minimum:

FIRMR 201-20.103-4(b)(1) & (2)

- Technical or operational requirements for compatibility,
- Risk and impact of a conversion failure on agency critical mission needs are so great that non-compatible resources are not a feasible alternative.

Factors to Consider

FIRMR
201-1-20.103-4(a)

FIRMR 201-1-20.103-4(a) requires the user to consider the following factors in determining whether a compatibility-limited acquisition is justified:

- Is the compatibility-limited requirement essential to retain the existing software without redesign to meet agency critical mission needs?
- Is the Government likely to suffer serious injury, financial or otherwise, if conversion to another system is unsuccessful?
- How essential is it to maintain parallel operations? Is it necessary to continue operating the old system in parallel with the new system until the new system can fully support the agency's mission needs?

If these factors have not been addressed in the requirements analysis, it is possible that the compatibility-limited justification will NOT be sufficient to withstand a protest.

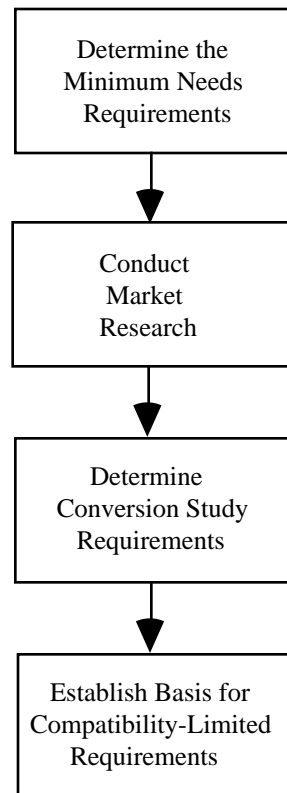
(continued on next page)

32.3 Documentation for Compatibility-Limited Requirements *(continued)*

Four-Step Process
for Justification
by the User

FIRMR Part 20

If it is necessary to justify a compatibility-limited requirement, the user should have accomplished the four steps as shown below. These are outlined in FIRMR Part 20.



32.3 Documentation for Compatibility-Limited Requirements *(continued)*

Decision Table

The decision table below summarizes the actions that you must verify in a compatibility-limited requirement to ensure that competition has not been unnecessarily restricted.

If...	Then..
The requiring agency has specified a compatibility-limited requirement, and NOT conducted a requirements analysis	Return to user to conduct a requirements analysis to determine the agency's minimum needs in accordance with FIRMR 201-20.103-4
A conversion study is required, but has NOT be conducted	Return to the requiring agency to conduct a conversion study. (See FIRMR 201-20.203-4)
The requirement for a compatibility-limited specification is justified	Obtain copy of the decision and incorporate the specification into the RFP. (See FIRMR 201-20.103-4)
The requirement for a compatibility-limited specification is NOT justified	Return to the requiring agency. (See FIRMR 201-20.103-4)

Unacceptable Justification

FAR 6.301(c)

You should be aware that lack of advance planning or the unavailability of fiscal year funds is NEVER a valid basis for justifying a restrictive acquisition. (See FAR 6.301(c).) Remember, the compatibility-limited justification MUST be in accordance with FIRMR 201-20.103-4(a)(1) and (2).

32.4 Differences Among a Specification, a Standard and a SOW

Differences Among Specifications, Standards, and a SOW

There are important differences which you must understand about specifications, standards, and the SOW in a FIP resource acquisition:

- “specification” means a *description of the technical requirements* for a product used to determine acceptability.
- “standard” is a document that establishes engineering and technical limitations and applications of items, materials processes, methods designs and engineering practices. Example: electrical standards established by societies of manufacturers and electrical engineers for private sector use, but available to the Government.
- “statement of work” is the complete description of work to be performed under the contract, encompassing all specifications and standards established or referenced in the contract.

Remember the requiring agency or program office will normally select all the appropriate specifications and standards, and may even draft the original SOW for a FIP resource acquisition. However, as the contract specialist or contracting officer, you are responsible to review the specifications and standards, require any necessary justifications, and edit the SOW as required to support selection of the most advantageous offer.

Impact of Brooks Act on Specifications

There is one more thing that you must remember about specifications. FIPS resources to support intelligence activities, encryption, and command and control of military forces are NOT subject to the Brooks Act. Therefore, the requiring activity has more leeway in developing specifications for these types of requirements.

SUMMARY

In this chapter, you learned about the types of specifications that are typically used in FIP resources acquisitions and, for each type, the strengths, weaknesses, and conditions of use, including functional performance, design requirements, compatibility-limited, brand name or equal, and specific make and model. In the next chapter, you will learn how to determine the relevancy of the *Federal ADP and Telecommunications Standards Index* and how to distinguish whether these standards are either incorporated into the solicitation or waived.

CHAPTER 33

REVIEW STANDARDS FOR FIP RESOURCES ACQUISITIONS

Chapter Vignette

“I’m getting nervous again about developing a FIP resources solicitation, “ said Mark. “Hey, am I going to get some help in developing this thing?”

“First things first,” Marcia replied. “You will have help, including technical expertise from the people who develop the requirements and standards, but you cannot just blindly accept their requirements and proposed standards. You need to know the seven different categories of FIP standards, and you have to understand the differences among them. You must be familiar with the Federal ADP and Telecommunications Standards Index as an acquisition tool. You will find that some standards can be incorporated into the solicitation or waived, but you have to be ready to work knowledgeably with the technical staff.”

Course Learning Objectives

At the end of this chapter, you will be able to:

Overall:

Determine the relevancy of the “Federal ADP and Telecommunications Standards Index” and distinguish how these standards are either incorporated into the solicitation or waived.

Individual:

- 33.1 Describe roles and responsibilities related to standards.
- 33.2 Summarize the seven categories of FIP standards.
- 33.3 Explain the relevance of the *Federal ADP and Telecommunications Standards Index*. and illustrate how these standards are either incorporated into the solicitation or waived.
- 33.4 Illustrate conditions when standards would not be used.

Chapter Overview

Scope

This chapter describes the role of standards in the FIP resources acquisition process. Although we often take standards for granted, they are important to our day-to-day life. Imagine, for example, a world where standard light bulb sizes, electrical sockets, or disk sizes and formats did not exist! As you know, there are existing standards for nearly all the supplies and services which the Federal Government regularly acquires.

Like many other aspects of FIP resource acquisitions, Congress decided that FIP resource standards are sufficiently important to require a separate program. As you learned in Chapter 1, the *Brooks Act* established the Federal Computer Systems Standards Program, now run by the National Institute of Standards and Technology (NIST). In addition, the General Services Administration (GSA) became responsible for implementing computer standards in the procurement, utilization, and disposition of computer equipment.

Before the statutory merging of ADP and telecommunications brought about by the *Paperwork Reduction Reauthorization Act*, GSA was responsible for telecommunications standards development. However, in 1972, GSA delegated this responsibility to DOD's National Communication System (NCS), but retained final approval and implementation authority.

So, you should understand that today there are three primary parties involved in the development and use of Federal standards:

- NIST, responsible for ADP and some telecommunications standards as defined in the *Paperwork Reduction Reauthorization Act*, issues *Federal Information Processing Standards (FIPS)*
- NCS, responsible for telecommunications standards not managed by NIST, develops *Federal telecommunications standards (FED-STDs)*
- GSA, responsible for standards implementation, and issues guidance that explains to contracting officers how to specify requirements using FIPS and FED-STDs

(Topic continued on next page)

Chapter Overview

Scope (continued)

FIPS and FED-STDs are *mandatory* Federal standards, *to the extent that they apply to the agency's requirement*. This permits agencies to exercise discretion in the use of standards based on agency need.

This chapter presents information you will need to review the standards proposed by technical personnel in a proposed FIP resource acquisition and to determine whether those proposed standards should be incorporated into a solicitation, waived, or does not apply.

References

In order to understand the discussion in this chapter, you should be familiar with the following references:

- The FIRM, Subpart 201-20.303, *Standards*
 - FIRM Bulletin C-3, which provides ordering information for the Index
 - The *Federal ADP and Telecommunications Standards Index*, updated biannually by GSA
 - Proposed and newly issued standards for a FIP resources acquisition, published in the *Federal Register*
-

Topics Covered in this Chapter

This chapter includes the following topics:

SECTION	TITLE	PAGE
33.1	Roles and Responsibilities Related to Standards	33-5
33.2	Seven Categories of FIP Standards	33-6
33.3	The Relevance of the Federal ADP and Telecommunications Standards Index	33-10
33.4	Conditions When FIP Standards Would Not Be Used	33-14

33.1 Roles and Responsibilities Related to Standards

Responsibilities of Technical Personnel

FIRMR 201-
20.303(c)

The responsibility for determining which standards apply to an acquisition rests with technical personnel.

FIRMR 201-20.303(c) explains that, when a Federal agency has a requirement for a FIP resource, the technical and requirements personnel in that agency shall review each proposed standard to determine its applicability to each requirement and work with the contracting personnel to ***“ensure that all applicable Federal standards are specified in any resulting solicitation.”***

Contracting Personnel

FIRMR 201-
39.1002

Contracting officers are responsible under the FIRMR for including in solicitations terminology that incorporates each standard applicable to the type of FIP resources being acquired.

You are not expected to be an expert on standards proposed for a FIP resource requirement, but you are expected to work closely with the agency’s technical and requirements personnel to make sure that they provide this information to be used for solicitation development. You should also be familiar enough with the requirement and with Federal standards to make sure that technical personnel have provided you with a complete list.

Need for Close Coordination

FIRMR 201-
20.303(c)

You can see that the selection of the proper standards for a FIP resource acquisition requires close and careful coordination. In fact, FIRMR 201-20.303(c) requires such coordination between the technical personnel and contracting personnel.

33.2 Seven Categories of FIP Standards

Seven Categories of Standards

FIRMR 201-20.303

FIRMR 201-20.303 describes *seven different categories* of standards that apply to FIP resources. These seven categories, commonly used for ADPE and telecommunications acquisitions, are summarized in the following table.

SEVEN CATEGORIES OF STANDARDS	
1.	<i>Hardware Standards</i> - include FIPS such as FIPS 157 dealing with image scanners.
2.	<i>Software Standards</i> - include FIPS such as FIPS 160 concerning C language.
3.	<i>Applications Standards</i> - FIPS - none currently specified.
4.	<i>Data Standards</i> - include FIPS such as FIPS 4-1, concerning date codes.
5.	<i>Operations Standards</i> - FIPS - such as FIPS 46-1 concerning data encryption.
6.	<i>Telecommunications Standards</i> - include FED-STDs such as FED-STD 1002A, concerning time and frequency standards.
7.	<i>Computer-related Telecommunications Standards</i> - include FIPS such as FIPS 138, concerning circuitry characteristics.

Although not currently in the FIRMR, the Index uses one additional category: *Computer Security*. For example, FIPS 46-1, Data Encryption Standard, once listed as an ADP operations standard, is now categorized as a computer security standard. You may recall that the *Computer Security Act of 1987* authorized the Secretary of Commerce (with the support of NIST) to issue such standards.

Note that GSA's seven categories of standards include both FIPS—sometimes referred to as FIPS PUBS, short for *Federal Information Processing Standards Publications*—and FED-STDs.

As discussed in the Chapter Overview, FIPS cover standards related to ADPE, defined by the *Paperwork Reduction Reauthorization Act* to include certain telecommunications resources. FED-STDs include those categories in the Federal Supply Class (FSC) of “Telecommunications” of the Federal Standards Program which are NOT defined as ADPE under the *Paperwork Reduction Reauthorization Act of 1986*.

Nonetheless, how FIPS are categorized will mean less to you than whether a given standard—FIPS or FED-STD—applies to your acquisition.

(continued on next page)

33.2 Seven Categories of FIP Standards *(continued)*

Use of Other Standards

There are dozens of Federal standards. You may find that these standards do not completely describe an agency requirement. When this occurs, it may be necessary for your agency to use other standards, such as *interim standards, voluntary standards developed by the private sector, agency-unique standards, or alternate standards*. In addition, there are *military standards, national standards and international standards*.

Use of Interim Standards

In some cases, you may find that there are no precise, permanent standards that meet the requirement. In such cases, the requiring agency may choose to use one or more *interim standards*.

FIRMR 201-
20.303(c)(2)

An interim standard is a standard that has not been permanently adopted by the Federal Government, but which may be used in an acquisition for FIP resources if it is to the agency's advantage. In fact, FIRMR 201-20.303(c)(2) encourages agencies to use interim standards, when no federal standard applies.

Use of an interim standard may require development of standard solicitation clauses. Agency technical and contracting personnel may need to prepare the specification for the standard.

Use of Voluntary Standards

FIRMR 201-
20.303(c)(3)

If Federal standards do not exist for the type of FIP resources your agency plans to acquire, FIRMR 201-20.303(c)(3) advises that you consider the use of *voluntary standards*. Voluntary standards are standards developed by industry and trade associations, which have been adopted throughout a domestic industry or even internationally.

For example, the American National Standards Institute (ANSI) establishes many industry standards that are mandatory for all American manufacturers, but which you may use in a Government solicitation on a voluntary basis. One example is ANSI X.12 for electronic data interchange. Another example of a voluntary standard is the Personal Computer Memory Card International Association (PCMCIA) standards developed for portable and laptop computers.

Underwriters Laboratory is an example of an organization that develops standards you may find useful and voluntary use

(Topic continued on next page)

33.2 Seven Categories of FIP Standards *(continued)*

Use of Voluntary
Standards
(continued)

Note that association and industry members may be bound by these standards, but *their use by the Federal Government is voluntary*. Nevertheless, these standards can be very useful, especially when a Federal agency intends to acquire a commercially available item for which a federal standard is not yet approved.

National and international ADP, telecommunications, and office systems standards are listed in the *Federal ADP and Telecommunication Standards Index*.

Use of Agency-
Unique Standards

FIRMR 201-
20.303(c)(4)

In cases where there are no Federal, national, or international standards, the FIRMR requires agencies to “consider the development and use of agency-unique standards.”

However, two major restrictions apply.

First, such standards must **NOT** violate the requirements for “full and open competition” in the *Competition in Contracting Act*. For example, an agency may not develop and use an interim standard that is so restrictive that it unfairly eliminates all but one potential offeror or specifies a single make and model.

Second, agencies planning to use an agency-unique standard must coordinate with NIST.

If your agency’s technical staff proposes using an agency-unique standard, *you should remind them of these requirements*.

Use of Alternate
Standards

FIRMR 201-
20.303(c)(5)

In some cases, an agency may want to use a standard other than a Federal standard. For example, an agency may find that another standard used by industry is more suitable than an existing FIPS. This type of standard is called an *alternate standard*.

The head of the agency may permit use of such an alternate standard, such as for the acquisition and use of computer security items. However, in such cases, *the standards **must** be more stringent than the applicable federal standards **and** contain at least the functional provisions of the applicable federal standard*.

(Topic continued on next page)

33.2 Seven Categories of FIP Standards *(continued)*

Use of Alternate Standards (continued)	For example, an agency could not require an offeror to provide a FORTRAN software language system that did not at least meet the functional provisions of the FIPS 69-1.
Use of Other FIPS PUBS	You should also be aware that there are other FIPS PUBS that you may want to specify. NIST refers to them as Non-Mandatory, Guidelines, and Program Information Documents. For example, FIPS 180, Secure Hash Standard, is for writing algorithms and FIPS 106, is a Guideline on Software Maintenance.
Encouraging Industry Comments on Standards	You can rely on prospective contractors to help ensure that you have specified complete and up-to-date standards and specifications by using DRAFT solicitations and presolicitation conferences. When technology is advancing rapidly, as is always the case with FIP resources, comments from prospective offerors may reveal defects in the Government's proposed standards or specifications. You can then correct these defects before final release of the solicitation.

33.3 The Relevance of the Federal ADP and Telecommunications Standards Index

Introduction

Usually, technical personnel in the requiring agency who develop the requirement for FIP resources will cite one or more FIPS or FED-STDs for inclusion in the solicitation. The cited standards are your *starting point* when determining how your solicitation for FIP resources will specify standards.

You CANNOT assume that the requiring agency's technical personnel fully researched the standards. *If in doubt, ask to make sure the requiring agency checked the FIPS and FED-STDs for applicability to the acquisition.*

Usually, you will be able to determine in discussions with the agency technical personnel why they selected certain standards and whether these standards are really appropriate. If they have not, you should refer them to the *Federal ADP and Telecommunications Standards Index*.

Contents of the Index

The *Federal ADP and Telecommunications Standards Index*, updated twice each year, is the starting point for researching FIP resources standards. The Index provides information on:

- National and International Standards
 - FIPS and FED-STDs
 - Subject Index of Federal and Industry Standards
 - Non-Mandatory, Guidelines, and Program Information Documents
 - Standards Checklist.
 - Terminology to Incorporate Standards in Solicitations
-

(continued on next page)

33.3 The Relevance of the Federal ADP and Telecommunications Standards Index (continued)

Subject Index of Federal and Industry Standards

The *Subject Index of Federal and Industry Standards* is the first tool you should use to determine if technical personnel have been thorough in evaluating the applicability of standards. The index organizes the standards and guidelines by technical area, such as graphics, disk, and data transmission, with columns to indicate whether the standard may apply to mainframe, minicomputers, or personal computers. The table below shows how the information is presented in the Index.

INFORMATION SYSTEMS MATRIX			
FIPS/FED-STDS/OTHER	MAIN	MINI	PC
I. INFORMATION INTERCHANGE			
a. INFORMATION INTERCHANGE CODES			
(S) FIPS 1-2 (ASCII)	•	•	•
b. CHARACTER SET REPRESENTATION			
(S) FIPS 32-1 (OCR)	•	•	•
(S) FIPS 33-1 (OCR)	•	•	•
(I) ANSI X3.42-1975			
(I) ANSI X3.78-1981			
c. GRAPHICS			
(S) FIPS 128 (CGM)	•	•	•
(S) FIPS 153 (PHIGS)		•	•
d. OPTICAL CHARACTER RECOGNITION			
Print Quality, Positioning, and Specifications			
(S) FIPS 32-1 (OCR)	•	•	•
(S) FIPS 89 (OCR)	•	•	•
(G) FIPS 90 (OCR)			
(S) FIPS 129 (OCR)			
(I) ANSI X3.3-1970			

[Note: ANSI standards are voluntary national standards.]

(continued on next page)

33.3 The Relevance of the Federal ADP and Telecommunications Standards Index (continued)

Standards Checklist Another tool is the *Standards Checklist*, which serves as a convenient guide for reviewing and determining the applicability of standards. The standards checklist is organized as shown in the table below.

STANDARDS CHECKLIST AS OF 04/01/93

Check Appropriate Column			
Standard Applies	Standard Does Not Apply	Standard Applies But Was Waived	Standard Titles
FEDERAL INFORMATION PROCESSING STANDARDS (FIPS)			
			<p>FIPS 1-2, Code for Information Interchange, Its Representations, Subsets, and Extensions</p> <p>FIPS 2-1, Perforated Tape Code for Information Interchange</p> <p>FIPS 4-1, Calendar Date</p> <p>FIPS 5-2, Codes for the Identification of the States, District of Columbia, and the Outlying Areas of the United States, and Associated Areas</p>

Using the standards checklist, agency technical and contracting staff determine whether the standard:

- Applies,
- Does not apply, or
- Applies, but use is waived.

The *Federal ADP and Telecommunications Standards Index* will help you make these decisions.

(Topic continued on next page)

33.3 The Relevance of the Federal ADP and Telecommunications Standards Index (continued)

Standards
Checklist
(continued)

The Standards Checklist is sometimes incorporated into solicitation documents in place of the standard terminology. In fact, to make sure that no standards are overlooked, you should regularly include a Standards Checklist in your solicitations.

Use of the checklist is strongly encouraged because it can make a complicated FIP resource acquisition easier for offerors to understand and increases the quality and simplicity of the proposals that you will have to evaluate.

How to Obtain an
Index and
Checklist

You can order the *Federal ADP and Telecommunications Standards Index*, which includes the Standards Checklist, from:

Superintendent of Documents
Government Printing Office
Washington, DC 20402

This document is also on GSA's CD-ROM.

33.4 Conditions When FIP Standards Would NOT be Used

Introduction

The technical experts in the requiring agency are responsible for selecting standards to be incorporated into a solicitation. *However, you are responsible for making sure that the appropriate standards have been selected. The contracting officer must seek appropriate waivers (as applicable) prior to incorporating standards into the solicitation.*

Remember, in any given FIP resource acquisition, each standard will either:

- Apply and be incorporated into the RFP,
 - NOT apply, in which no further action is taken, or
 - Apply, but needs to be waived.
-

When Standards Would NOT Be Used

Sometimes, it's easy to decide that a standard does NOT apply. For example, if you are buying support services, standards in the hardware category clearly do not apply. In these cases, technical or contracting staff using the Standards Checklist would check the column "Standard does not apply." No further action would be required.

However, at other times the determination may be quite difficult. For example, FIPS 161, Electronic Data Interchange (EDI) is applicable:

“to the interchange of data between Federal agencies or organizations if the data are to be transmitted electronically, and ANSI X.12 transaction sets or EDIFACT messages meet the data requirement of the agencies or organizations for the subject of the interchange have been developed and approved under the conditions set forth in FIPS 161.”

Note that the requiring agency may be interchanging data—the primary technical area of the standard—but determine that ANSI X.12 transaction sets do not meet the agency's data requirements. In that case, the standard would not apply.

There are other situations when an agency might decide that a standard should not be specified. For example, suppose an agency's technical staff evaluated the effect of specifying a new standard—and determined that requiring conformance with the standard would have a negative effect on required compatibility with current resources or a negative effect on competitiveness and cost. In such examples, the agency could decide to waive use of the standard but must justify such a waiver.

(continued on next page)

33.4 Conditions When FIP Standards Would NOT be Used *(continued)*

Waivers and Exceptions

FIRMR 201-
20.303(d)
DFARS 239.7202

FIRMR 201-20.303(d) and DFARS 239.7202 provide guidance on waivers and exceptions.

Briefly, FIRMR 201-20.303(d) explains that:

- The Secretary of Commerce has delegated to the heads of executive departments and agencies the authority to waive *FIPS* that are compulsory for agency use in the acquisition and management of FIP resources
- The General Services Administration alone has authority to grant an exception to the use of *FED-STDs*.

If the requiring agency plans to waive use of a mandatory FIPS or FED-STD, you should make sure that the request for waiver has been submitted to and approved by the agency head or that the request for exception has been submitted to and approved by GSA.

Requests for Exceptions

Requests for exception to use of a FED-STD should be sent to:

General Services Administration
Policy and Regulations Division (KMP)
18th and F Streets, NW
Washington, DC 20405

Deviations

FIRMR 201-4.001

Usually, if you need to vary from a specific requirement of the FIRMR, you need to obtain permission in the form of a deviation.

However, if an individual FIPS standard is waived, then you do NOT need a deviation from the FIRMR. Also, if GSA grants an exception to the use of an individual FED-STD, then you do NOT need a deviation from the FIRMR.

Remember all FIPS PUBS are required. However, those addressed as guidelines are recommended.

(continued on next page)

33.4 Conditions When FIP Standards Would NOT be Used *(continued)*

Summary

Decision Table

The following decision table summarizes the actions that you should take as a contracting officer or contract specialist when reviewing standards for FIP resource solicitations.

Decision Table	
Summary of Actions on Review of Standards for a Solicitation	
If...	Then...
The requiring agency's technical experts have proposed standards...	Make sure that the standards are appropriate. Ask to be sure. Check the Federal ADP and Telecommunications Standards Index.
The requiring agency's technical experts have NOT proposed standards...	Advise them they should research and propose standards. Refer them to the Federal ADP and Telecommunications Standards Index.
Proposed standards do NOT seem to be appropriate...	Consult with technical experts to select more appropriate standards.
Federal Standards are NOT appropriate...	Consider voluntary standards from industry, such as ANSI standards, OR Consider using interim standards, OR Consider using agency-unique standards, coordinating with NIST, OR Determine whether FIPS should be waived or whether an exception should be requested.

(continued on next page)

33.4 Conditions When FIP Standards Would NOT be Used *(continued)*

How to Obtain
Individual FIPS

You can obtain individual Federal Information Processing Standards (FIPS) from:

National Technical Information Service (NTIS)
U.S. Department of Commerce
Springfield, VA 22161

You can obtain individual Federal Telecommunications Standards (FED-STDs) from:

General Services Administration
Federal Supply Service Bureau (FSSB)
Specifications Section, Suite 8100
490 East L'Enfant Plaza, SW
Washington, DC 20407

SUMMARY

In this chapter, you learned how to use the *Federal ADP and Telecommunications Standards Index* and to distinguish how these standards are either incorporated into the solicitation or waived. In the next chapter, you will learn how to analyze a Statement of Work (SOW).

CHAPTER 34

ANALYZE STATEMENTS OF WORK FOR FIP RESOURCES ACQUISITIONS

Chapter Vignette

“Now that you understand the importance of specifications and standards, you should be ready to critique a proposed SOW for a FIP acquisition,” Marcia said. “Even if the appropriate specifications and standards have been chosen, the language of the SOW can cause serious problems if it is not carefully written. There are definitely some things you should look for when you critique a proposed SOW and that applies to all seven groups of FIP resources. Otherwise, you run a great risk of releasing a SOW which may not attain the Government’s acquisition objectives.”

Course Learning Objectives

At the end of this chapter, you will be able to:

Overall:

Analyze a Statement of Work (SOW).

Individual:

- 34.1 Relate the purpose of an SOW.
- 34.2 Summarize the general content of a SOW.
- 34.3 Show the importance of a well-written scope statement.

Chapter Overview

Scope

This chapter presents the information you will need in order to analyze the use of a SOW for a proposed FIP resource acquisition.

After you have determined that specifications and standards proposed for a FIP resources acquisition are appropriate (see Chapters 32 and 33), you must then make sure that the SOW states exactly what is required of the contractor to meet the Government requirements. It is possible to select the perfect standards for a solicitation, and still write a poor SOW that confuses offerors and leads to poor performance on a contract.

It is critical that offerors clearly and fully understand the Government's requirements so they can make realistic technical and cost proposals. This is important in all acquisitions, but especially in complex ones, including many FIP resources acquisitions.

Topics in This Chapter

This chapter includes the following topics:

SECTION	TITLE	PAGE
34.1	Purpose of a SOW	34-4
34.2	General Content of a SOW	34-5
34.3	Importance of a Well-Written Scope Statement	34-14

References

You may need the following reference in order to follow the topics in this chapter:

- Military Handbook 245C (MIL-HDBK-245C)
-

34.1 Purpose of a Statement of Work

Introduction

A statement of work is a very important document in the acquisition process. Misunderstanding or confusion by the offerors because of a poorly written statement of work (SOW) can lead to nonresponsive proposals. Therefore, it is important to understand the purpose of an SOW, so that it is written to fulfill its purpose.

Purpose of SOW

The purpose of a SOW is to clearly describe the tasks to be performed, products to be furnished, services to be supplied, and sometimes the methods to be used for an acquisition, so that offerors will have a clear understanding of the Government's requirements and can provide accurate responses to meet the Government's needs. It is important that the SOW be well-written to eliminate ambiguity and prevent confusion. SOWs must describe exactly what the requiring agency needs so that the Request for Proposal or Invitation for Bids can be developed correctly and accurately.

Difference Between a Specification and a SOW

A SOW is the complete description of work to be performed under the contract, encompassing all specifications and standards established or referenced in the contract. It may also explain the methods to be used, and identifies the products to be acquired. A specification is a description of the technical requirements for a material product or service that includes the criteria for determining whether these requirements are met.

Specifications for a requirement are described in the statement of work.

34.2 General Content of a SOW

General Content of SOW

The SOW contains a statement of the work to be performed, along with the supporting background information, listing of documents needed, specific tasks to be done, and an explanation of any special conditions that apply to delivery, inspection/acceptance, and place of performance.

In short, a SOW provides information on the WHO, WHAT, WHERE, WHEN, and HOW of performance.

Format for SOW

There is no set format for the SOW in a FIP resource acquisition used by all agencies. However, the GSA has developed a set of standard solicitation documents for FIP systems hardware, software, and maintenance. This set is available from the Government Printing Office. In addition, your office probably has useful examples of SOWs from previous FIP resource acquisitions, which you can use for reference.

In addition, Military Handbook 245C, dated Sep 1991, discusses six recommended formats for the preparation of a SOW. None of these six corresponds specifically to the acquisition of information resources, but you can adapt and tailor the format for a FIP resource acquisition.

(continued on next page)

34.2 General Content of a SOW *(continued)*

Example of a Preferred Format

The following format is an example of a preferred format, taken from Exhibit 3 of Military Handbook 245C. Note that this example is for a “brand name or equal” requirement.

- Section 1 - Scope
- Section 2 - Background
- Section 3 - Applicable Documents
- Section 4 - Tasks
- Section 5 - Contract Deliverables
- Section 6 - Government Furnished Facilities and Services
- Section 7 - Contractor Furnished Property and Services
- Section 8 - Acceptance and Inspection
- Section 9 - Place of Contract Performance
- Section 10 - Task Completion Date
- Section 11 - Place of Inspection and Acceptance of Deliverables
- Section 12 - Security Requirements

Enclosures to the SOW

1. Attachments (Background Information)
2. Appendices (Specifications and Requirements)
3. Schedules (Delivery or Period of Performances)
4. Exhibits (Applicable Documents) are attached at the end of the SOW

Analyzing Format and Content

As a contract specialist or contracting officer, you will be responsible for the format of the solicitation. Much of the content will be provided by technical staff within the agency. You must be prepared to analyze the content, as well as the format, in order to ensure that the SOW meets all requirements and avoids problem areas, such as restricting competition.

(continued on next page)

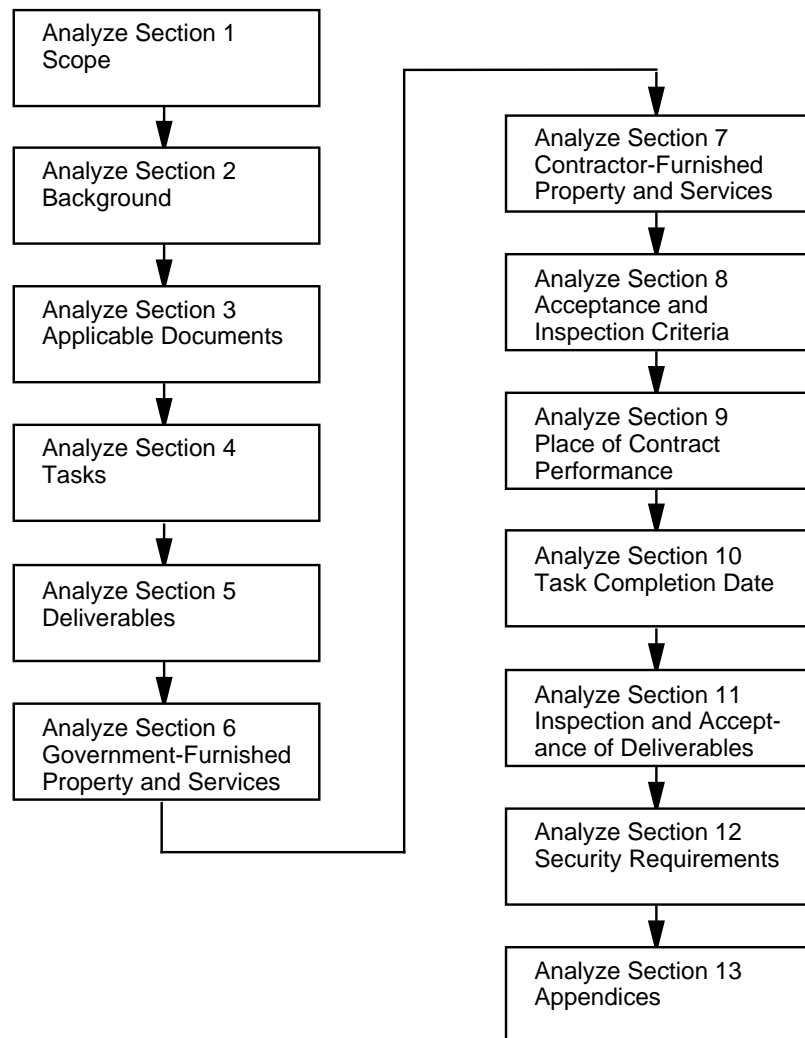
34.2 General Content of a SOW *(continued)*

Content of the SOW Sections

Make sure that each section of the SOW clearly and completely describes the information requirements or the conditions that are appropriate to that section. The flow chart following shows a step-by-step approach to do this.

Flow Chart

It is best to analyze the format and content in a systematic manner, step-by-step (and section-by-section). The following flow chart shows such a step-by-step-approach.



(continued on next page)

34.2 General Content of a SOW *(continued)*

Step 1
Analyze
Section 1, Scope

The scope section presents a general overview of the objectives and the desired results. A well-written scope is critical because it establishes the parameters or limits of the contractor's efforts. Read this section carefully to make sure that you understand it.

CAUTION
Remember, any work performed outside the parameters established in the scope will constitute changes in scope and require new negotiations on all aspects of cost, price, fee and schedule.

Look for any ambiguity that might lead to "scope creep." For example, in a FIP resource acquisition, if your acquisition strategy calls for infusion of future technology, then the scope should address technology infusion strategy.

Step 2
Analyze
Section 2,
Background

In the background section, you should provide a general description of the technical considerations. Look for any known specific concept, technique, methodology, results of previous related work, and interfaces which may influence the contractor's effort or direction of approach.

Remember, the background describes the relation of the present effort to the major program goals. If you need a very lengthy or extensive background description, then you can make the detailed background into an attachment and reference the attachment in this section.

34.2 General Content of a SOW *(continued)*

Step 3
Analyze
Section 3,
Applicable
Documents

In this section, you should look for mention of all the known documents and referenced material that provide requirements for the contractor to perform. You can include documentation such as specifications, purchase descriptions and the index of applicable standards as appendices. Check to make sure that each applicable standard is accounted for.

For example, this is where you would insert a copy of the *Standards Checklist* taken from the “*Federal ADP and Telecommunications Standards Index*.”

Do NOT include in this section:

- funding documents; and/or
- justifications, or other procurement documents.
- Data Items Descriptions (DIDS);
- DD Form 1423 Contract Data Requirements List (CDRL);

DoD Specific
Requirement

Step 4
Analyze
Section 4, Tasks

In Section 4 of the SOW, you must check all the specific tasks, or steps, that the contractor must perform in order to provide the end item, deliverable or service.

Examples of tasks that you might include in this section of the SOW are: *providing services, security, technical enhancements, maintenance reports, studies, documents, conduct of training, perform tests, install equipment, remove equipment, conduct surveys and analyses, or provide a level of effort, etc.*

Step 5
Analyze
Section 5,
Deliverables

In this section you must check for precise statement of what the contractor is to deliver at specified points in time as work progresses, and a statement of what is to be delivered, to include details concerning the type, form, media, and quantity of the deliverables.

Examples of contract deliverables might include: equipment, levels of security, types of training, models, telecommunications, mock-ups, software, labor hours, manuals, documentation, reports, and other data.

You can refer to specifications in the appendices, CDRLs, and Data Item Descriptions in this section, but these should not be included in their entirety here.

(continued on next page)

34.2 General Content of a SOW *(continued)*

Step 6
Analyze
Section 6,
Government-
Furnished
Facilities and
Services

In this section, you check for a list of all property and services that the Government will make available to a contractor for use during performance of the contract. Look out for promised GFE or property that cannot be provided or might not be provided in a timely manner and might delay performance. Examples include:

office space	reports
test facilities	studies
benchmarking tests data	lodging
office furniture	storage areas for equipment
parking spaces	spare parts
telephones	computer services
copies of regulations	forms
documents	personnel services (such as data entry)

ADP media supplies or Government computers.

CAUTION

The inability to provide Government-furnished equipment on time, in the quantities stated, or expeditiously, as described in this section, is a major source of contractor complaint during contract administration. Ensure that you do not promise in this section to provide anything the Government cannot deliver. Delays in providing equipment can impact the contractor's performance and result in claims against the Government.

34.2 General Content of a SOW (continued)

Step 7
Analyze Section
7, Contractor-
Furnished
Property and
Services

In this section, you will check for the property and services which the contractor shall provide for proper performance of the contract. This must be a complete listing of all such items which you expect the contractor to provide. *If the contract is for software development, address the data rights which the Government is to receive.*

Step 8
Analyze
Section 8,
Acceptance and
Inspection Criteria

In this section, check how each deliverable listed in Section 5 of the SOW is to be received, inspected, tested, or verified by the Contracting Officer's Representative (COR) or the Contracting Officer's Technical Representative (COTR). Explain the time period in which the COR will determine whether or not to accept the deliverable.

Example: *"The Government shall accept or reject a deliverable within 30 days of receipt. The Government shall apply the acceptance testing criteria described in this contract."*

Look for any contractor responsibility for specific testing. For example, *"The Government will conduct acceptance testing in accordance with the test procedures specified in the contract. The contractor shall provide written certification that all software code is complete."* This information is considered specific to the SOW and detailed in Section C of the UCF. However, more general information on acceptance and inspection may be found in Section E.

Step 9
Analyze
Section 9,
Place of Contract
Performance

In this section, check for **where** the work is to be performed or the place of delivery. Look for the name, address, and phone number of the Government point of contact, if Government facilities are to be used, items are to be delivered to the Government. Does the stated place of performance make sense? Will any special arrangements be necessary? For example, will contractor personnel be performing work in a Government facility?

34.2 General Content of a SOW (continued)

Step 10
Analyze
Section 10, Task
Completion Date

In this section, look for the **period of performance** for each deliverable end item or delivery schedule. Is the specific task completion date stated for each deliverable? It is helpful if this data is presented in a table format. If any task completion dates are not clearly stated or were omitted, clarify the dates.

Look for tasks that might be out of sequence. Remember, some tasks cannot be completed until previous tasks are first done. For example, training of Government personnel will normally not be scheduled until a system has been fully installed and passed acceptance testing.

You can also request a schedule summary and attach it as a delivery schedule to the SOW and then reference the schedule in this section.

Remember that the schedule summary is used by the Contracting Officer as an exhibit to the solicitation and will later be incorporated into the body of the contract.

Usually, the delivery schedule should be stated in terms of calendar days after award of the contract.

Example: “...*Sixty days after contract award*....”

However, in some cases, there may be reason to schedule some deliveries by a specific calendar date, such as “...not later than 10:00 AM Eastern Daylight Savings Time, January 31, 199X....”

Step 11
Analyze
Section 11,
Inspection and
Acceptance of
Deliverables

Check for where the deliverable is to be shipped, installed, inspected, tested, accepted, and WHO will receive, test, inspect, or accept it. Note that in most cases, the COTR will be responsible for inspecting and testing, in accordance with a test or acceptance plan, before notifying the Contracting Officer whether an item should be accepted. The acceptance or test plan will explain the procedures for acceptance testing. However, you may give the COTR any necessary special administrative instructions deemed appropriate by the contracting officer.

34.2 General Content of a SOW (continued)

Step 12
Analyze
Section 12,
Security
Requirements

In this section, you must check for any security restraints, national security aspects, or security classifications that impact or are required for the contractor (including subcontractors) in contract performance. You may need assistance from the program technical staff or from security specialists to analyze this section. Ask for help if you need it.

CAUTION

When personal or facility security requirements are necessary in the performance of work, a DD Form 254, Contract Security Classification Specification, should be included.

You should NOT include requirements for computer security in this section. Include such requirements in Sections 4 and 5.

Reference any applicable computer security documents in Section 3 and the detailed specifications for computer security are made a part of the Appendix.

Step 13
Analyze
Section 13,
Appendices

In this step, you should check each appendix to the SOW. This document describes in detail the minimum requirements. Look for a clearly developed appendix for each type of requirement.

For example, there may be a separate appendix for:

- Equipment Specifications;
- Communications Requirements;
- Facilities Requirements;
- Security;
- System Requirements;
- Software Requirements;
- Live Test Requirements; and
- Contract Support Requirements (e.g. maintenance, documentation, manpower skills, training, etc.).

34.3 Importance of a Well-Written Scope Statement

Importance of a Well-Written Scope Statement

It is critical that the scope statement be well-written, thorough, and unambiguous. If there is any ambiguity or lack of clarity in the scope statement, it is almost certain to cause misunderstanding and differences of opinion as to the intended meaning of the contractual document.

There are several dangers when this happens.

1. The Government may not get what it wants. Qualified offerors may not understand what is required and fail to respond properly. Offerors may protest the wording of the scope if it appears to offer unfair advantages to a competitor or otherwise restrict competition.
2. The Government may have to spend considerable time, effort, and expense clarifying the scope. This delays the acquisition.
3. The winning offeror may proceed to furnish a supply or service, based on a faulty understanding of the scope, which can cause later difficulties during contract administration.

For these reasons, it is imperative that the scope of work be well-written.

Examples of Poorly-Written Scope Statements

It is helpful to examine examples of poorly-written SOWs to see how they can be misinterpreted.

The samples on the following pages show extracts from scope statements which are ambiguous, incomplete, misleading or otherwise contain flaws which can lead to misunderstandings.

An improved version of the same scope statement follows each faulty example.

For example, consider the following sample of a scope statement for maintenance services.

34.3 Importance of a Well-Written Scope Statement

Examples of
Poorly-Written
Scope Statements
(continued)

Example 1

Extract From A Poorly-Written Scope Statement

C.3 Scope

“The scope of work is intended to provide two person-years maintenance services for maintenance staffing in support of a Local Area Network (LAN) which must become operational on a 24 hour per day, seven days per week basis, beginning not later than 1 October 1996, and extending for a period of 12 months at the Green Hill computer facility. This will include all tasks normally associated with such maintenance support.”

Improved Version Of Scope Statement

C.3 Scope

“The scope of work is intended to provide two person-years of maintenance services for maintenance staffing in support of a Local Area Network (LAN) which must become operational on a 24 hour per day, seven day per week basis, beginning not later than 1 October 1996, and extending for a period of 12 months at the Green Hill computer facility. Maintenance will include tasks associated with:

- a. Diagnostics and troubleshooting.
- b. Removal of damaged or nonfunctioning components.
- c. Replacement and repair of damaged or nonfunctioning components.
- d. Receipt, inspection, acceptance, and storage of rebuilt components.
- e. System testing.
- f. Recommendations for system maintenance improvements.”

(Example 1 continued on next page)

34.3 Importance of a Well Written Scope Statement *(continued)*

Examples of
Poorly-Written
Scope Statements
(continued)

Example 1 (continued)

You can see that in Example 1, the first extract from the scope statement leaves some room for misunderstanding and ambiguity. It does NOT clearly specify WHAT is to be supplied.

If you were a potential offeror reading this first example, what would you consider to be “all tasks normally associated with such maintenance support?”

Also, note that the improved version specifies the tasks more clearly by listing them. It also clarifies the relative scope by specifying that a total of two man years are required.

Based only on this information, some offerors will be induced to read further, and conclude that an offer may be in their interest. Other offerors, seeing the relatively small size of the effort will be induced to make a “no bid” decision and not waste any time in reading further.

Also, because the WHAT has been clarified in the improved statement, it is easier to understand the relative skill levels to be required of the contractor personnel. “Trouble shooting and diagnostics” are relatively high skill tasks, compared to “receipt...and storage of rebuilt components” (parts), which is more of a clerical requirement.

In this case, the WHAT clarifies the WHO and alerts the offeror that it must provide relatively highly skilled maintenance personnel.

34.3 Importance of a Well Written Scope Statement *(continued)*

Examples of
Poorly-Written
Scope Statements
(continued)

Example 2

Consider the next example. This one is for computer training services.

Extract From A Poorly-Written Scope Statement

C.3 Scope

“The scope of work is intended to obtain computer training services for Government personnel at the Green Hill computer facility in the operation and maintenance of a specialized data base using the commercial HealthMaster software. The data base stores information on all tasks performed by emergency room personnel in hospitals that are members of the national HealthMaster Alert Network (HMAN). The contractor shall provide training in receipt and review of reports, data base entry, printing of reports, and asking reporting hospitals for data clarification.”

Improved Version Of Scope Statement

C.3 Scope

“The scope of work is intended to obtain computer training services for 300 Government personnel at the Green Hill computer facility in the operation and maintenance of a specialized data base which was established and customized from the commercial HealthMaster software. The data base stores information on all tasks performed by emergency room personnel in reporting hospitals that are members of the national HealthMaster Alert Network (HMAN). The training shall include:

- a. Receipt of coded reports.
- b. Review of coded reports for completeness.
- c. Data base entry and access.
- d. Printing summary reports, monthly reports and requests for clarification.
- e. Sending requests for data clarification via modem.
- f. Interpretation of trouble messages and error messages.”

(Example 2 continued on next page)

34.3 Importance of a Well Written Scope Statement *(continued)*

Examples of Poorly-Written Scope Statements (continued)

Example 2 (continued)

In Example 2, you can again see that the level of detail in the improved version provides more detail concerning the WHO, WHAT, WHERE, WHEN, HOW, AND WHY. All of this additional detail is important to the potential offeror who will read the scope looking for details to make a bid or no bid decision.

Note that in this example, there is some ambiguity about the tasks to be performed. Note that the improved version specifies HOW MANY Government persons are to be trained, alerts the reader that a customized version of the data base will be used, and more clearly specifies the general scope of the tasks to be performed (the WHAT and HOW).

Even though this scope statement is to be a general statement, the small amount of added detail does provide the potential offeror much more information about the research to be done.

Reviewing the Scope Statement

The point here is that you should carefully review your scope statement in order to ensure that it is:

- Clear;
 - Complete;
 - Concise;
 - Unambiguous; and
 - Contains sufficient detail to act as the overview of the acquisition.
-

SUMMARY

In this chapter, you learned to analyze a Statement of Work. In the next chapter, you will learn about preparing an acquisition plan.

CHAPTER 35

PREPARATION OF AN ACQUISITION PLAN

Chapter Vignette

“What about the acquisition plan,” asked Mark. “I suppose that requires some special considerations for a FIP resources acquisition.”

“Right you are,” replied Marcia. “Of course, an acquisition plan for FIP resources contains many of the same parts and features similar to other acquisition plans, and the procedures are very similar and equally important. You still need to begin with a well written proposed requirement, do market research, generate a thorough SOW and specifications, and go through a requirements analysis, analyze alternatives, and provide any justifications needed.”

Course Learning Objectives

At the end of this chapter, you will be able to:

Overall:

Prepare an acquisition plan based on the following documents:

- the proposed requirement;
- market survey reports;
- SOW and specifications;
- a requirements analysis, analysis of alternatives, conversion study (if applicable);
- justification documentation; and
- output from BARS or the equivalent.

Individual:

35.1 Gather information for an acquisition plan.

35.2 Develop an acquisition plan.

Chapter Overview

Scope

This chapter discusses how to prepare an acquisition plan, based on the following documents:

- the proposed requirement;
- market survey reports;
- SOW and specifications;
- a requirements analysis, analysis of alternatives, conversion study (if applicable);
- justification documentation; and
- output from BARS or the equivalent.

(Note that this chapter begins the explanation of actions you must take during the Presolicitation/Solicitation phase of an acquisition for a FIP resource acquisition.)

Topics in This Chapter

This chapter includes the following topics:

SECTION	TITLE	PAGE
35.1	The Acquisition Plan: Overview	35-4
35.2	Developing the Acquisition Plan	35-7

References

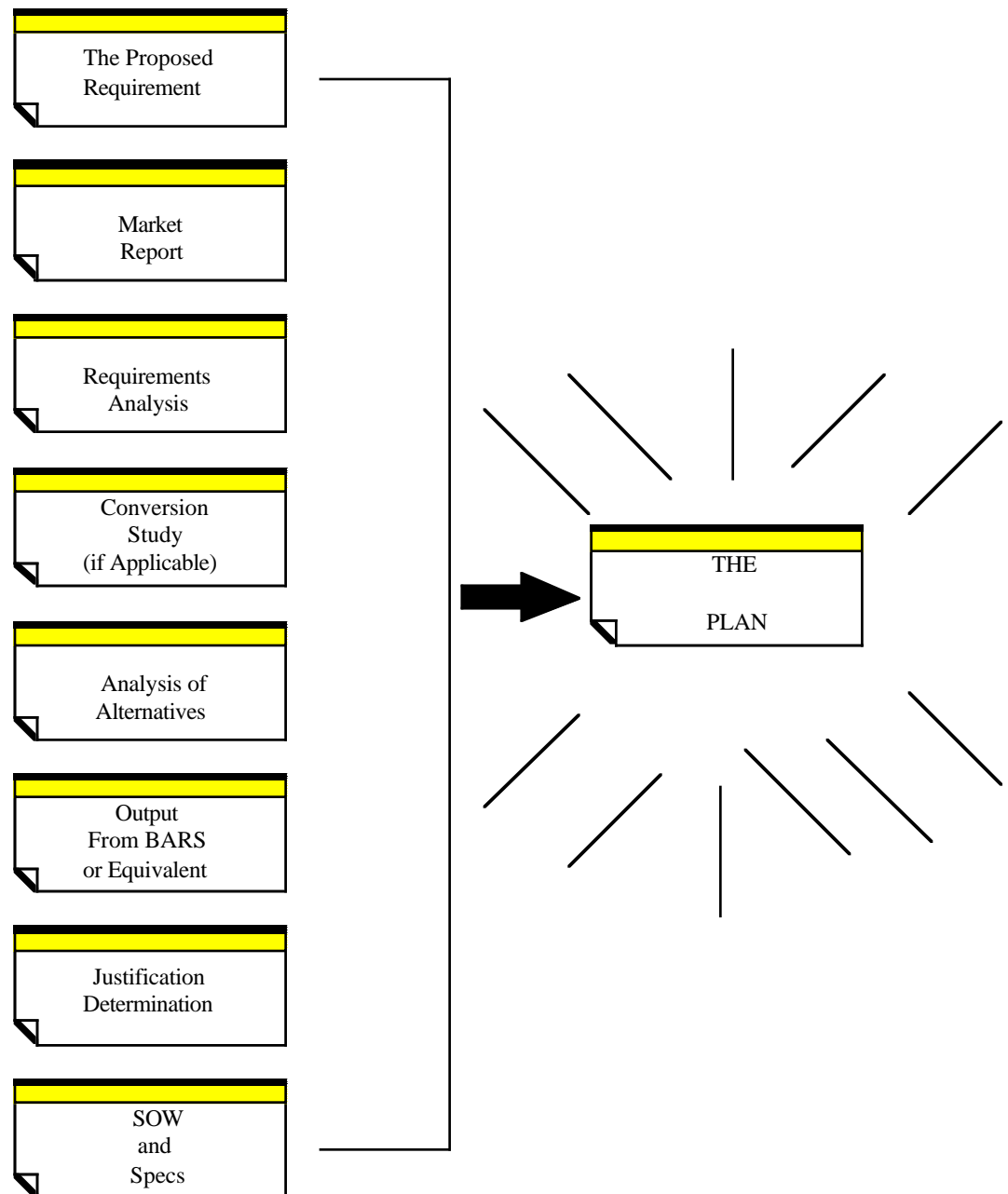
You may need several key references and documents to understand the actions discussed in this chapter. These include:

- FAR Part 7
 - DFARS 207.1
 - FIRMR Bulletins C-5 and C-7
 - DoD Directives 5000.1 and 5000.2
 - OMB Circular A-76
-

35.1 Acquisition Plan: Overview

Introduction

The following illustration shows most of the key documents which normally have the greatest effect on the acquisition plan. You will not be responsible for preparing all these documents, but at this point, you should understand how and why they were developed and their effect on the acquisition plan.



35.1 Acquisition Plan: Overview *(continued)*

The Acquisition Plan

The key document produced in the Presolicitation Phase of the acquisition process is the acquisition plan. In many cases, the acquisition plan will be largely prepared by the requesting agency. As a contract specialist or contracting officer, you may be asked to provide contractual guidance to the technical staff members who develop most of the plan inputs, and you may be required to assist in obtaining FIP support services, such as professional consultants, to assist in developing the acquisition plan.

FAR Part 7

FAR Part 7 also discusses the overall requirement for acquisition planning

If you are concerned that the acquisition plan does NOT satisfy the requirements, you should contact the requiring agency and state your concerns, and provide any recommendations for changes and improvements. In some instances, return the requirements.

DFAR Subpart 207.1 DFAR 207.105

DFAR Subpart 207.1 contains limited information on acquisition plans for DoD-related acquisitions, including contents of written acquisition plans (DFAR 207.105). If you are concerned about “acquisition streamlining” in a DoD procurement, you should also check directives including DoD 5000.2 (*Defense Acquisition Management Policies and Procedures*).

Conformance With Earlier Strategic Planning

FIRMR 201-18.002(d) FIRMR 201-18.001

You will recall that the Paperwork Reduction Reauthorization Act of 1986 and OMB Circular A-130 require executive agencies to develop strategic plans for FIP resources acquisition (see Chapters 1 and 2). The acquisition plan for any FIP resource acquisition should be in conformance with the strategic planning done earlier. Agencies should ensure that “*acquisition of FIP resources is in accordance with the updated 5-year plan*” (FIRMR 201-18.002(d)). You may also recall that the GSA’s Office of Technical Assistance can provide assistance in acquisition planning, on a cost reimbursable basis.

You may be responsible to assemble and review the completed acquisition plan and determine that it is complete and thorough and meets all the requirements for proceeding with the acquisition.

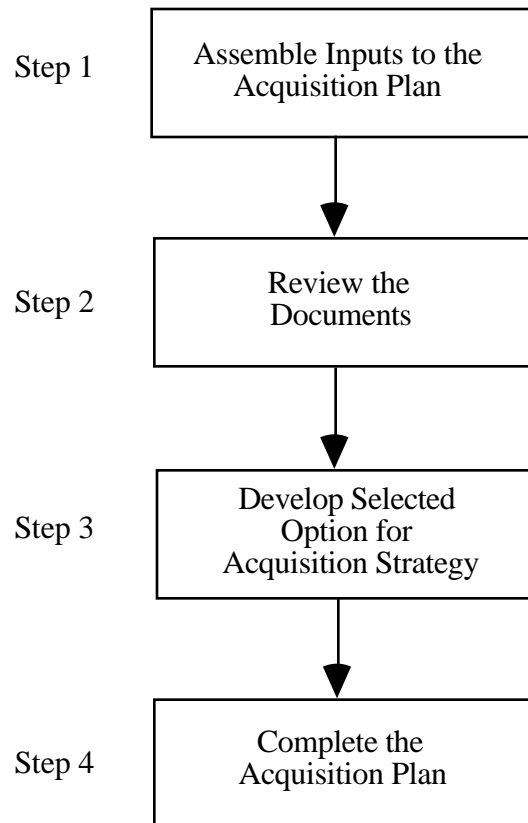
Of course, planning is strongly encouraged for all major acquisitions. The complex nature of many FIP resources acquisitions, such as system integration projects, makes a good acquisition plan essential. The preparation of the acquisition plan begins with the key input documents and ends with the completed, approved acquisition plan. The flow chart on the following page shows the steps required to complete the acquisition plan.

(continued on next page)

35.1 Acquisition Plan: Overview *(continued)*

Flow Chart

The following flow chart shows the actions you should take to complete the acquisition plan for a FIP resource acquisition.



35.2 Developing the Acquisition Plan

Step 1 Assemble Inputs to the Acquisition Plan

The first step is to assemble all the inputs that you will require to finalize the acquisition plan. These inputs will consist of formal documents such as the requirements analysis and analysis of alternatives and informal documents, such as notes from meetings and telephone conversations.

In most cases, you will already be familiar with many or all of these inputs, because you will have seen them earlier in the Acquisition Planning Phase and may even have provided guidance for their completion.

However, if you were only recently assigned to the acquisition team, you may not be familiar with the content of all these input documents, so you must be sure you have assembled them all for review before you finalize the acquisition plan.

FIRMR Bulletin C-5

You may recall that Attachment A to FIRMR Bulletin C-5 provides information on the documents that you may need to complete an agency procurement request (APR). Many of these same documents will be the key inputs to your acquisition plan, so you should assemble and review these documents before trying to complete the acquisition plan. The checklist on the following page may help you assemble the documents that you will need.

Of course, you may not require all of these input documents for every FIP resources acquisition plan. For example, if the acquisition does not concern telecommunications, you can ignore the telecommunications documents in the checklist. Also, if there were no requirement for a conversion study, there won't be one included.

FIRMR 201-20.1

But, you will always have at least the requirements analysis (FIRMR 201-20.1) and the analysis of alternatives (FIRMR 201-20.2) along with some market survey data,

(continued on next page)

35.2 Developing the Acquisition Plan *(continued)*

Checklist

Required?		CHECKLIST OF KEY INPUT DOCUMENTS
Yes	No	
_____	_____	1. Requirements Analysis should outline in detail the exact requirement, refined after market research, and explain the nature, special technical characteristics and quantities required. May include market survey and risk analysis information.
_____	_____	2. Analysis of Alternatives is a detailed examination of the alternatives and tradeoffs for the proposed acquisition, with a conclusion that favors one alternative or option above the others.
_____	_____	3. Determination to support a compatibility-limited requirement - in some cases there will be concern about new FIP resources being able to interface with older FIP resources on hand in the agency. If so, this must have been explained and a determination reached to proceed with a justified, compatibility-limited acquisition.
_____	_____	4. Conversion Study - there may also have been a conversion study, especially if there was any concern about operating older software on newer hardware or new software on older hardware.
_____	_____	5. Certified Data to support a requirement available from only one responsible source, if there was any concern about sole source acquisition.
_____	_____	6. Certified Data to support a requirement using a specific make and model specification.
_____	_____	7. Description of planned actions to foster competition for subsequent acquisitions - in some cases this will be needed to show that the agency is not to be "locked in" to only one OEM or vendor.
_____	_____	8. Justification for more than one agency to provide switching facilities at building locations (if needed for a telecommunications acquisition).
_____	_____	9. Exception to the use of FTS2000 mandatory network services (if needed for a telecommunications acquisition).
_____	_____	10. Exception to the use of GSA local telecommunications service mandatory switching services.
_____	_____	11. Construction information is required if buildings must be constructed or modified by GSA to accommodate the FIP resource. You will need this documentation to determine the true overall cost of the acquisition. It may be necessary to request <i>multiyear contracting authority</i> for telecommunications resources. (FIRMR 201-20.306)
_____	_____	12. Agency or GSA references - any special references such as minutes of meetings, memos of telephone conversations or similar reference materials which might support the rationale for your decisions and recommendations.
_____	_____	13. Any special guidance or authorizations from GSA, the SSA or Trail Boss, or oversight committees - including any special waivers, exceptions or guidance for the acquisition (See FIRMR Bulletin C-7.).

(continued on next page)

35.2 Developing the Acquisition Plan *(continued)*

Step 2 Review the Documents

Once you are sure that you have assembled all the necessary input documents that you will need for the acquisition plan, you should review them carefully for both technical content and internal consistency to support the acquisition strategy that you will incorporate into the plan.

Remember, in most cases, you may already be quite familiar with these documents, unless you have only recently been assigned to the acquisition team. However, it is still important that you review them because a considerable period of time might have elapsed and this may have an effect on the development of your plan.

For example, some of the information in the original requirements analysis may be many months old and no longer be valid, because of changes in technology. Also, some of the market survey data may be obsolete, if it is more than several months old. For these reasons, you should review the input documents for both *technical content* and for *internal consistency*.

Review for Technical Content

You are not expected to be an expert on technical content, such as the suitability of specifications, so you may need to ask for technical assistance in reviewing the *technical content* of the acquisition plan. If possible, you may ask technical experts (other than those who prepared the technical inputs) to review the technical content for accuracy and suitability.

Also, on some complex acquisitions, there may even be outside experts (consultants) brought in to provide a comprehensive final review of the technical content.

Review for Internal Consistency

Even if you require assistance to edit for technical content, you should, at this point, be able to conduct your own edit for the *internal consistency* of the plan. The purpose of this edit will be to ensure that all parts of the plan agree with one another, and that any conclusions or recommendations are supported by the necessary documentation.

For example, if this is to be a “best value” acquisition, there should be clear rationale as to which technical evaluation factors in the source selection plan are the most important, and these should be clearly explained and supported by documentation for a “best value” buy.

(continued on next page)

35.2 Developing the Acquisition Plan *(continued)*

Step 3
Develop Selected
Option for
Acquisition
Strategy

Once you have assembled the key input documents and reviewed them for both technical content and for internal consistency, you are ready to complete development of the plan and to incorporate the acquisition strategy that you need to support that option most likely to attain the acquisition objectives.

You will recall that during the analysis of alternatives, you examined the available alternatives and tradeoffs and documented one alternative as the most favorable option for attaining the acquisition objectives. At this point, you are nearly ready to complete the acquisition plan, based on the alternative that you selected during the analysis of alternatives, modified by any events or guidance that occurred since then.

The specific option that you develop and incorporate into the acquisition plan will come from one of the alternatives you examined earlier during the analysis of alternatives. The specific alternatives will vary, but you probably started with at least the following options:

- *Do nothing* - sometimes the most advantageous course of action may be to NOT proceed with the acquisition, at least not until requirements stabilize or the supporting documentation, such as sole source justification, is more suitable.
- *Share FIP resources from those available within the agency or within the Government.*
- *Transfer FIP resources from those available within the agency or from within the Government.*
- *Acquire from mandatory for use or mandatory for consideration sources*
- *Acquire through contracting in the market place* (using small purchase procedures, sealed bidding, or negotiated procurement techniques, depending on the size and characteristics of the requirements).

The decision table on the following page outlines these five general options and may help you and the requiring activity personnel determine the action you should take in developing the acquisition plan.

(continued on next page)

35.2 Developing the Acquisition Plan *(continued)*

Decision Table

DECISION TABLE FOR DEVELOPING ACQUISITION PLAN	
IF...	THEN...
<ul style="list-style-type: none"> The agency's requirements were subject to sudden or frequent change, or if you concluded that the risks of attaining the acquisition objectives were too high you may have concluded that the most prudent strategy would be to delay the acquisition, or do nothing at this time, or at least until the requirement stabilized and risks were lower... 	<ul style="list-style-type: none"> You may conclude the prudent strategy is to do nothing at this time. Be sure to document your conclusion.
<ul style="list-style-type: none"> The most advantageous alternative was sharing of resources... 	<ul style="list-style-type: none"> Specify the resources to be shared, with milestones, timetables and points of contact.
<ul style="list-style-type: none"> The most advantageous alternative was transfer of resources from within the agency or from within the Government... 	<ul style="list-style-type: none"> Specify the resources to be transferred, milestones, timetables and points of contact.
<ul style="list-style-type: none"> Mandatory for use or mandatory for consideration sources are the most advantageous... 	<ul style="list-style-type: none"> Identify the specific source (Schedules or other) and explain why this is most advantageous.
<ul style="list-style-type: none"> Acquiring through the market place is most advantageous... 	<ul style="list-style-type: none"> Identify and justify the specific method of procurement (small purchase, sealed bidding, or negotiated procurement.)

(continued on next page)

35.2 Developing the Acquisition Plan *(continued)*

Step 4
Complete the
Acquisition Plan

At this point you are finally ready to write the acquisition plan. Much of what you will include in the plan has already been developed earlier by you or by others, but there will still be some original writing you may have to do. For example, you may have to write much of the contract administration plan which will be one enclosure (possibly with the help of the COTR).

Format

FAR 7.105

There is no single format that is used by all agencies, but there are some common features that should go into any comprehensive acquisition plan. The FAR specifies the information necessary for an acquisition plan. If your agency has a preferred format, follow it. The outline below is a guide which you may follow and modify as needed. *You should consider including at least these kinds of information .*

SAMPLE FORMAT OUTLINE FOR ACQUISITION PLAN

1. Acquisition Title/Number/Cost Estimate
2. Brief Description of Statement of Work - if appropriate, also discuss potential risks and problems, issues to be resolved and any recommendations.
3. Review of the Technical/Business Management Evaluation Factors - Describe the factors for ranking proposals and identify whether the award will be made on the basis of "greatest value" or "lowest price/technically acceptable."
4. Review Source Selection Plan - Discuss any potential for multiple award, price-related factors to be evaluated and overall weights assigned to "best value" and price.
5. Recommended Sources - If appropriate, attach list of sources, based on market survey.
6. Competition - Discuss what steps are necessary to increase competition. If the competition is to be sole source or otherwise restricted, describe justification.
7. Business/Economic Development Program - discuss any considerations given to award as a set-aside or any socioeconomic factors considered.
8. Method of Procurement - Discuss method such as sealed bidding or negotiated procurement.
9. Lease vs. Purchase - Discuss the rationale for determining one or both methods.
10. Type of Contract - Discuss the rationale for selection.
11. Government - Furnished Property (GFP) Data - Identify property/data, impact on competition and difference in total cost to the Government with and without GFP.
12. Special Terms and Conditions - Discuss any special clauses such as options or warranties.
13. Contract Administration - Discuss the contract performance monitoring required. Identify (if applicable) the COTR(s). Attach Contract Administration Plan as required.

(continued on next page)

35.2 Developing the Acquisition Plan *(continued)*

Milestone Chart

In addition, you should also attach to the acquisition plan a detailed milestone chart, showing certain key actions, in sequence, and the expected date for their completion. Again, there is no specific format used by all agencies. The milestone chart should show the sequence of major events in the acquisition process, beginning with a statement of requirements and ending with the contract award milestones.

The milestones that you enter will depend on the size and complexity of the acquisition. For example, a complex systems integration project may include several pages of milestones.

Allow for Delays

Note that for each milestone there should be scheduled “begin date” and “planned” and “actual” completion dates. In many acquisitions, there is a high risk that at least one or more of the planned milestone dates will be missed. Normally, missing one or more planned completions will not place the entire acquisition at risk. However, if a missed or “slipped” milestone is critical or does pose some unacceptable risk, you should discuss this risk and the appropriate risk control measures in the acquisition plan.

For example, if you expect that there will be many qualified offerors, for a very complex acquisition, you may have to allow more time for the “evaluation of proposals,” “negotiations” and “BAFO” milestones.

Be careful in entering milestone dates. The milestones must be realistic and you must allow for lead time and delays. Keep in mind that many milestones are dependent on others or cannot be accomplished unless previous milestones are fully completed.

(continued on next page)

35.2 Developing the Acquisition Plan *(continued)*

Size of the Plan	You can see that if you include all the information shown in the sample outline, including the detailed milestone chart and Contract Administration Plan, you will develop a comprehensive acquisition plan of considerable size, possibly running to hundreds of pages for a large acquisition, such as a systems integration buy.
Review of Completed Plan	In order to minimize the possibility of mistakes in such a large document, you should have each member of the acquisition team, including technical and contract office personnel, review the completed document and recommend any necessary changes.
Briefing for SSA	<p>Even after such careful review, the acquisition plan is not completed until approval by the Source Selection Authority (SSA), Trail Boss and/or oversight committee, so you must be ready to rehearse and present a briefing on the acquisition plan to these individuals.</p> <p><i>The purpose of this briefing is to recommend that the SSA, Trail Boss or oversight committee approve the plan so you can continue with the subsequent actions, including publicizing the request for proposals.</i></p>

SUMMARY

In this chapter, you learned to prepare an acquisition plan based on various documents. In the next chapter, you will learn to itemize and apply special and price-related factors in developing an acquisition strategy for FIP resources.

CHAPTER 36

SPECIAL AND PRICE-RELATED FACTORS FOR FIP RESOURCES

Chapter Vignette

“Is there anything special about the price-related factors in a FIP resource acquisition,” asked Mark. “It seems that with all the other special cautions and considerations that you have mentioned, there must be something special about the price-related factors that I should be aware of,” he said.

“To be sure,” Marcia replied. “There are a few special considerations. For example, you have to consider lease vs. purchase prices, finance charges for leasing telecommunications equipment, Government-furnished property costs, options, trade-ins, buy-in pricing and software licenses.”

“Oh, yes,” she continued, “and there is also the matter of economic price adjustments, and you have to consider how many Government personnel will be required.”

Course Learning Objectives

At the end of this chapter, you will be able to:

Overall:

Itemize and apply special factors and cost-related factors in developing an acquisition strategy for FIP resource acquisitions and summarize the price-related factors which must be considered in preparing a FIP resource acquisition plan.

Individual:

36.1 Itemize and apply special factors in developing an acquisition strategy for FIP resource acquisitions, including:

- DPA as a factor
- Software as an impediment to full and open competition for hardware procurement
- Systems life
- Residual value (not currently practiced)
- Availability and suitability of used equipment and/or compatibles
- Potential for a lead agency contract
- Investigation of conversion software alternatives
- If performed by the Government
- Condition of competition
- Examination of obsolete vs. outdated
- Third party procurements
- Maintenance
- Peripherals
- Requirements when bundling occurs

(continued on next page)

Course Learning Objectives *(continued)*

At the end of this chapter, you will be able to:

Individual *(continued)*:

36.2 Summarize the price-related factors which must be considered in preparing a FIP resource acquisition plan:

- Lease vs. purchase price
- Finance charges (for leasing of telecommunications equipment)
- Government-furnished property costs
- Options
- Economic price adjustments
- Maintenance, training, installation, technical manuals, and supplemental supplies
- Power and cooling requirements
- Number of Government support personnel required
- Floor space
- Buy-in pricing
- Software licenses

Chapter Overview

Scope

This chapter explains how you will itemize and apply special factors and price-related factors in a FIP resources acquisition. You will apply these factors while you are developing the overall acquisition strategy, during the Presolicitation phase of the acquisition, during the development of the acquisition plan and after the draft SOW, technical specifications and any necessary justifications have been identified.

You will see that some of these special factors are mostly of a technical nature, and you will be assisted by the technical experts in applying these factors. For example, considerations of obsolescence require expert technical opinion. However, you will have primary responsibility to ensure that these special factors and price-related factors are applied.

Special Factors for Acquisition Strategy

In developing the overall acquisition strategy (which will be documented in the acquisition plan) you may consider any number of special factors, but *you should consider at least the following special factors* which are discussed in this chapter:

- Delegation of Procurement Authority (DPA);
- Software as an impediment to full and open competition for hardware procurements;
- Systems life;
- Residual value (not currently practiced);
- Availability and suitability of used equipment and/or compatibles;
- Potential for lead agency contract;
- Investigation of software conversion alternatives;
- If performed by the Government;
- Condition of competition;
- Examination of obsolete (versus outdated);
- Third party procurements;
- Maintenance;
- Peripherals; and
- Requirements when “bundling” occurs.

(Topic continued on next page)

Chapter Overview *(continued)*

Special Factors for Acquisition Strategy (continued)

You can see that most of these special factors are technical in nature. On the other hand, some special factors do have a more important relation to price, and the agency technical experts will be of limited assistance in analyzing price-related factors. For example, considerations of lease-versus purchase price alternatives are more price-related than technical in nature. Those types of factors will have to be worked out primarily by contracting office personnel, such as yourself.

Price-Related Factors in the Acquisition Plan

The emphasis in this chapter is on the *price-related factors* that you should consider. These price-related factors which you will consider in the development of the acquisition plan include:

- lease versus purchase price;
- finance charges (for leasing telecommunications equipment);
- Government-furnished property costs;
- options;
- economic price adjustments;
- maintenance, training, installation, technical manuals, and supplemental supplies;
- power and cooling requirements;
- number/type of Government support personnel required
- floor space;
- trade-in of excess equipment;
- buy-in pricing and
- software licenses.

You can see that many of these price-related special factors will require some technical input, but their greatest importance is their impact on the cost of the acquisition. You can use the checklists at the end of this chapter to make sure you do not overlook these factors.

(continued on next page)

Chapter Overview *(continued)*Topics in This
Chapter

This chapter includes the following topics:

SECTION	TITLE	PAGE
36.1	Special Factors to Consider in Developing a Strategy for FIP Resource Acquisition	36-7
36.2	Price-Related Factors to Consider in a FIP Resources Acquisition Plan	36-20

References

You may need several of the following key references to perform the procedures discussed in this chapter:

- FIRMR 201-4.001, 201-17.001, 201-20.103-4, 201-20.304, 201-20.305, 201-21.501, 201-39.1402-1, 201-39.1501-1, 201-21.501
 - FIRMR Bulletins C-2, C-5, C-7, C-12, C-14, C-27, C-29
 - OMB Circulars A-76, A-94
 - FAR Parts 6, 7.401
-

36.1 Special Factors to Consider in Developing a Strategy for FIP Resource Acquisition

Acquisition Strategy

Whenever you set about to acquire any commodity, you should develop an **acquisition strategy**. This is also true for acquiring FIP resources. However, in acquiring FIP resources, there are some special factors which you must consider.

Considering Special Factors

Here are some special factors which you must consider when you develop a strategy for a FIP resources acquisition.

- DPA as a factor;
 - Software as an impediment to full and open competition for hardware procurement;
 - Systems life;
 - Residual value (not currently practiced);
 - Availability and suitability of used equipment and/or compatibles;
 - Potential for a lead agency contract;
 - Investigation of conversion software alternatives;
 - If performed by the Government;
 - Condition of competition;
 - Examination of obsolete vs. outdated;
 - Third party procurements;
 - Maintenance;
 - Peripherals; and
 - Requirements when bundling occurs.
-

(continued on next page)

36.1 Special Factors to Consider in Developing a Strategy for FIP Resource Acquisition *(continued)*

DPA as a Special Factor

The first special factor that you should normally consider in developing the acquisition strategy is whether the GSA has granted a DPA to the agency. You will recall that the GSA has exclusive procurement authority for the procurement of FIP resources, but can delegate procurement authority to other agencies. This delegation of procurement authority can be either:

- regulatory (usually for purchases below a \$2,500,000 ceiling); OR
- specific to an agency; OR
- specific to a certain FIP acquisition.

If your agency already has a regulatory delegation of procurement authority, then your acquisition strategy does not have to include the GSA, because you will be proceeding on your own. Therefore, you should ask, *“Is this acquisition already covered under an existing DPA?”*

Determining Whether to Submit an APR

FIRMR Bulletin C-5

However, if your agency does NOT have a regulatory DPA AND the acquisition is for an amount greater than \$20,000,000/\$10,000,000/\$5,000,000 based on an agency’s IT budget (or greater than \$2,000,000/\$1,000,000/\$500,000, based on an agency’s IT budget) for other than full and open competition) for other than full and open competition, then you must decide whether to obtain a DPA from the GSA for the specific acquisition. You will do this by submitting an Agency Procurement Request (APR) to the GSA.

Do not make this decision to submit an APR and obtain a DPA lightly. You will have to submit complete documentation with the APR to justify your rationale for requesting the DPA. Usually, you will request a DPA when the acquisition is expected to be highly specialized and when your agency is convinced that it can manage the difficulties of the acquisition. In some cases, your agency will have a “Trail Boss” appointed to manage such a large scale or complex system acquisition.

(Note, for a more detailed discussion of DPA, see Chapter 37 - “Preparing an APR for a DPA.”)

(continued on next page)

36.1 Special Factors to Consider in Developing a Strategy for FIP Resource Acquisition *(continued)*

Software as an
Impediment to
Full and Open
Competition

A second special factor that you might consider in developing the acquisition strategy is whether software will be an impediment to full and open competition in the hardware procurement. Of course, if software plays no role in the acquisition, then this is not a factor.

However, if the acquisition will include both software and hardware, then you may have a problem. Some hardware may operate only with certain proprietary software. Other manufacturers' software (although cheaper) may not operate on the hardware. Also, software authors prefer to lease or license their software, rather than sell it outright. You might also have a high cost associated with conversion of files to the new software.

This means that if you plan to acquire new hardware, you may not have a free hand to acquire the most suitable or cheapest software, but may be tied to certain software, thus restricting free and open competition. In an extreme case, the software you require may even determine the hardware that you have to buy. In any case, you must determine whether software will impede free and open competition and prevent you from selecting the most advantageous alternative. Therefore, you might ask questions such as, "*What effect will the software requirements have on full and open competition?*"

(For a more detailed discussion of commercial software, see Chapter 34, "Acquiring Commercial Software.")

System Life

A third special factor you may consider in developing the acquisition strategy is the system life. You will recall that Chapter 5, "The System Life Cycle," discussed the concept of system life.

FIRMR 201-4.001

Recall that FIRMR 201-4.001 defined system life as "*a projection of the time period that begins with the installation of the FIP resource and ends when the agency's need for that resource has terminated.*"

If you are acquiring a system which is expected to have a long life cycle, you may require significant costs for maintenance, training and upgrades, and eventually, for disposal (scrapping).

(Topic continued on next page)

36.1 Special Factors to Consider in Developing a Strategy for FIP Resource Acquisition *(continued)*

System Life
(continued)

FIRMR 201-39.501-3

On the other hand, if you only expect to have the FIP resources for a few years, your expected costs for maintenance, upgrades and training may be very low. In any case, you should ask and answer questions such as “*How long do we expect to use this resource?*,” and “*Have we estimated life cycle impacts and costs?*” You should then calculate these costs as accurately as possible, based on the number of years or months that you expect to retain the system. Later, you must mention the system life when publicizing the intent to place an order (FIRMR 201-39.501-3). For more information on system life, see Chapter 5, “The System Life Cycle.”

Residual Value

A fourth special factor that you might consider in developing the acquisition strategy is the *residual value*. Residual value means the estimated value of a product (such as a FIP resource) to the Government, at the end of the system life. Some FIP resources may have considerable residual value when the agency no longer requires them. Other FIP resources may have little or no residual value remaining beyond scrap value.

For most commodities, you will normally consider residual value in determining the acquisition strategy. However, in preparing your acquisition strategy for a FIP resource, it may be difficult to estimate the residual value of a FIP resource at the end of an 8 or 10 year useful life cycle.

FAR 7.401

For example, it may be very hard to calculate the residual value of a main frame computer system after 10 years, because the technology is advancing so rapidly, you might not be able to estimate what the market might pay for the system at that time. Therefore, you should be careful about overestimating residual value for a FIP resource. You might do this if you overestimated salvage value at time of salvage or disposal (FAR 7.401). In developing the acquisition strategy, therefore, most agencies do NOT estimate residual value because the residual value is offset by the disposal costs.

(continued on next page)

36.1 Special Factors to Consider in Developing a Strategy for FIP Resource Acquisition *(continued)*

Consider Reuse

Even if there may not be much residual value, it may still be possible to continue reusing the FIP resource in another agency, so you should consider reuse, rather than residual value.

(Note - see Chapter 28, “Benefit-Cost and Present Value Analysis,” for information on present value analysis.)

Availability and Suitability of Used Equipment

Another special factor that you will consider in the acquisition strategy is the availability and suitability of used equipment. In some cases, you may find that the FIP resources required by an agency do NOT have to be acquired as new equipment. The requiring activity may be able to reuse equipment that is surplus to another activity within the agency or even elsewhere within the Federal Government. Or, you may be able to acquire used equipment in the market place, possibly at a lower price.

DoD Manual 7950.1-M

First, you should check within your own agency to determine whether there is surplus equipment that can satisfy all or part of the requirement. For example, the Department of Labor frequently reassigns older FIP resources to Job Corps training centers, rather than procure new equipment for the centers. DoD activities are required to follow the procedures specified in DoD 7950.1-M, Defense Automation Resources Management Manual, published by the Defense Automation Resources Information Center (DARIC). The DARIC bulletin board number is 1-800-637-6674.

Then, you can contact the GSA to determine if any other agency has reported equipment as surplus. Surplus equipment can be transferred to your agency at far less cost than acquisition of new equipment.

FIRMR Bulletins C-2, C-27, and C-29
--

You should proceed with acquisition of new equipment only after you have determined that there is no surplus to satisfy the requirement either within the agency or within other agencies. (See FIRMR Bulletins C-2, C-27, and C-29.)

In any case, you should ask the question “*Can this requirement be satisfied with used equipment?*”

(continued on next page)

36.1 Special Factors to Consider in Developing a Strategy for FIP Resource Acquisition *(continued)*

Potential for a
Lead Agency
Contract

In some cases, more than one Government agency may have an interest in acquiring a FIP resource. You should investigate the potential for a “lead agency” contract. For example, two or more agencies may have an identical requirement for FIP resources. In such a case, it does not make good sense to duplicate the acquisition.

Rather, one of the agencies, usually the one with the larger requirement, or an existing DPA, may be able to act as the lead agency in the acquisition. This means that one agency will have the primary responsibility for managing the acquisition. Of course, the other agency may furnish personnel to assist in all aspects of the presolicitation such as selection of specifications and writing the statement of work, and serving as evaluators.

You should therefore also ask “*Is there a potential for a lead agency contract in this acquisition?*”

Investigation of
Software
Conversion
Alternatives

If the acquisition concerns software, you should check to ensure that the technical personnel have investigated the alternatives for conversion of software. In some cases, an agency may have very large computer software files which will require conversion if new hardware or software is acquired. Depending on the size and complexity of the conversion effort, this can be a considerable cost and it must be identified and considered. Usually this will already be done in a conversion study.

FIRMR 201-20.203-4

FIRMR 201-20.203-4 provides guidance on conversion. It requires that when agencies determine conversion costs they must include any cost of conversion that can be stated in dollars. It also advises that “*When evaluating alternatives, it is important for the Government to consider its investments in FIP resources that may have to be converted, replaced or disposed of, as a result of the alternative selected.*”

(Topic continued on next page)

36.1 Special Factors to Consider in Developing a Strategy for FIP Resource Acquisition *(continued)*

Investigation of
Software
Conversion
Alternatives
(continued)

For example, an agency may determine that it only has to convert a very small percentage of its files if it acquires one type of software, but will have to convert a much greater percentage of its files if it acquires another type of software. In some cases, the cost of conversion may be so great that this factor will influence the selection of the software to be acquired. At a minimum, you should ask, “*What are the costs of software conversion?*”

FIRMR 201-39.1501-1

However, FIRMR 201-39.1501-1 cautions that when calculating the costs of conversion, you SHALL NOT include costs associated with the following:

- conversion of existing software and data bases that are to be redesigned, regardless of whether or not augmentation or FIP replacement resources are acquired;
- Purging duplicate or obsolete software, data bases and files;
- Development of documentation for existing application software; and
- Improvements in management and operating procedures;

(See Chapter 25, “Determining If Conversion Studies Are Necessary.”)

FIRMR
Bulletin C-14

You should also check Bulletin C-14. It discusses conversion of FIP resources, including *allowable conversion costs*, which might otherwise be overlooked, such as:

- Firmware required solely to permit the continued use of application software;
- Site preparation and modifications to installed environmental controls;
- Parallel operation of the old system during the conversion process, including off-site data processing support;
- Travel and training expenses, including pay and fringe benefits of Government employees during attendance at formal classroom training classes;
- Existing Software written in Federal standard or other ANSI standard higher-level language;

(Topic continued on next page)

36.1 Special Factors to Consider in Developing a Strategy for FIP Resource Acquisition *(continued)*

FIRMR
Bulletin C-14
(continued)

-
- Application software written in assembly or other nonstandard languages that will continue to meet essential agency mission needs without redesign;
 - Mission essential application software to be developed for operational use before the augmentation or replacement of FIP equipment and operating system software is installed (or before commercial FIP services are acquired); and
 - Conversion of data bases, data base design changes, and data base management systems (DBMS) to the extent necessary to permit the continued use of existing application software.

(Note - for more information on conversion, see Chapter 25 - "Determining if Conversion Studies are Necessary.")

If Performed by
the Government

In some cases, it may be the intention of the requiring agency to perform the software conversion or other acquisition tasks using only Government personnel, such as in-house programmers or systems analysts.

For example, the agency may have a large number of sensitive files or records that should only be handled by Government personnel for security reasons, or the agency may feel that the conversion costs will be done more cheaply in-house. If so, this intent must be clearly stated and understood to be part of the acquisition strategy. It will have an impact on the use of Government personnel and overall costs. You must consider all Government personnel costs, such as travel, training, pay and fringe benefits.

(continued on next page)

36.1 Special Factors to Consider in Developing a Strategy for FIP Resource Acquisition *(continued)*

Extent of Competition

FIRMR 201-17.001(g) & 201-20.103-3(c) & 201-39.6 FAR Part 6

Another special factor you should consider in the acquisition strategy is the extent of competition. FIRMR 201-17.001(g) states that a predominant consideration is to “achieve full and open competition to the maximum extent practicable.” Of course, in any acquisition, you should attempt to maximize competition. FIRMR 201-20.103-3(c) advises that you can do this by describing requirements in a manner that will attain full and open competition, unless other than full and open competition is justified in accordance with FIRMR 201-39.6 and FAR Part 6.

However, in some FIP resources acquisitions (especially for software), you may find in your market research that the competition may be limited. The level of competition that you expect will influence your acquisition strategy. For example, if an agency has a strong requirement for a “compatibility-limited” item, that may severely restrict the amount of competition, and require you to be more aggressive in negotiating a lower price that is favorable to the Government.

FIRMR 201-39.601

FIRMR 201-39.601 provides policy on competition requirements and cautions that an acquisition that uses a specific make and model specification must be justified, with certain exceptions for use of GSA mandatory schedules.

Therefore, in developing the acquisition strategy, you should ask questions such as, “*What competition is expected in this acquisition?*”

(continued on next page)

36.1 Special Factors to Consider in Developing a Strategy for FIP Resource Acquisition *(continued)*

Examination of
Obsolescence

FIRMR 201-4.001

Another special factor that you should consider is whether the agency has considered obsolescence. You will recall that FIRMR 201-4.001 defines obsolescence as, *“the state of FIP hardware or software that is either in a degenerative condition which, if not corrected, will render the resource useless, or becoming technologically outmoded compared to other hardware or software being sold.”*

FIRMR 201-20.203-5

Recall that FIRMR 201-20.203-5 requires that, as part of the analysis of alternatives, the agencies “shall determine strategies for maintaining up-to-date FIP resources and avoiding outdated FIP resources over the system life.”

FIRMR 201-22.303

If the resource will soon be obsolete, you might expect to negotiate a lower price with the offeror(s), or expect to obtain other favorable terms for the Government, as part of your acquisition strategy. However, if the FIP resource will no longer be supported or soon go out of production, this could affect the life cycle costs of supporting the hardware or software over a number of years. FIRMR 201-22.303 states that when the cost of operating existing outdated resources is greater than the cost of acquiring and operating technologically newer resources, agencies shall replace the existing outdated resources. This may require a careful analysis of relative costs. In any case, you should ask *“How soon will this FIP resource be obsolete?”*

For more information on obsolescence, see Chapter 18, “Obsolescence in the Market Place.”

Third Party
Procurements

Another factor to consider is the possibility of third party procurements. For example, just because you acquire a computer system from an OEM does not necessarily mean that you must also acquire the maintenance services from that same manufacturer. In fact, it may be more advantageous to acquire such FIP support services from a third party vendor, such as a company that specializes in maintenance.

Third party vendors may offer certain advantages, such as competitive prices. At the least, you should consider whether a third party source may be available and more advantageous. If so, you might make it part of your acquisition strategy.

You should ask, *“Would a third party procurement offer advantages?”*

(continued on next page)

36.1 Special Factors to Consider in Developing a Strategy for FIP Resource Acquisition *(continued)*

Maintenance

One special factor that is often overlooked in developing the acquisition strategy is the requirement for maintenance, which is a special FIP support service and part of the system life cycle consideration. Remember, a FIP resource may be in service for eight years or longer. This can lead to a substantial requirement for maintenance and the maintenance costs can become an increasingly greater overall part of the total acquisition cost.

You should therefore ask questions such as:

1. *“What are the expected maintenance requirements?”* (What maintenance will be performed by the Government and what will be done by contractors?)
2. *“Who will do the maintenance?”* (Government employees may require training to perform the maintenance, leading to increased training costs), and
3. *“How long do we expect to keep this item?”* (The longer you retain a FIP resource, the greater the overall maintenance costs.)

Originally, maintenance was only offered by the original equipment manufacturers (OEMs), who usually offered a “package deal” which included maintenance and warranty as part of acquisition costs, but now you may be able to obtain FIP resource maintenance at lower prices and more advantageous terms from third party vendors. However, make sure that third party maintenance will not violate OEM warranties.

(For more information on maintenance, see Chapter 9, “Acquiring FIP Maintenance Services.”)

(continued on next page)

36.1 Special Factors to Consider in Developing a Strategy for FIP Resource Acquisition *(continued)*

Peripherals

Another special factor to consider is the issue of peripherals. Peripherals are those hardware components of a system, such as printers, scanners, and related input and output devices, other than a central computer. In many cases, it may be cheaper or more advantageous to obtain peripherals from other sources, rather than obtaining them as part of a new system acquisition.

For example, suppose an agency requires a large scale computer system with a large computer and many printers and scanners. It may be more advantageous to obtain only the computer as a new acquisition, and to acquire the peripherals (printers and scanners) from the GSA's multiple awards schedule (MAS) where the prices are probably lower than the agency could negotiate separately.

Therefore, you should ask questions such as *“What peripherals are needed?”* and *“Can these peripherals be obtained elsewhere more cheaply?”*

Requirements When Bundling Occurs

Finally, another special factor that you should consider in developing the acquisition strategy is whether or not “bundling” will occur. Bundling is the practice of offering hardware and software bundled or sold as a package. The vendor will often offer a very attractive price as an inducement for the bundle, lower than the combined separate costs of the hardware and software if purchased separately.

However, the problem with bundling is that it may tie the Government to specific software which may not be the most advantageous in the long run. For this reason, it is usually against the Government's best interests to accept bundling as part of the acquisition strategy. If you do not accept bundling, then this should be clearly stated in the acquisition plan.

Summary Checklist

You can use the checklist for special factors on the following page to summarize the cost-related factors and the types of questions that you should ask.

36.1 Special Factors to Consider in Developing a Strategy for FIP Resource Acquisition *(continued)*

SUMMARY CHECKLIST FOR SPECIAL FACTORS IN ACQUISITION PLANNING

	Yes	No	N/A	Comments
1. Is this acquisition already covered by a DPA?				
2. Will the software requirements have an impediment to full and open competition for hardware procurement?				
3. Have you estimated life cycle impacts and costs?				
4. Have you calculated residual value (not currently practiced)?				
5. Is there suitable used and/or compatible equipment available?				
6. Is there a potential for a lead agency contract?				
7. Have software conversion alternatives been investigated?				
8. Has conversion of software to be performed by the Government been proposed?				
9. Are the conditions of competition fully understood?				
10. Have the issues of obsolescence been addressed?				
11. Will there be a third party procurement?				
12. Are maintenance requirements fully understood?				
13. Are requirements for peripherals fully understood?				
14. Are requirements for bundling fully expressed?				

36.2 Price-Related Factors to Consider in a FIP Resource Acquisition Plan

Price-Related Factors to Consider

In addition to the special factors mentioned above, which you will consider in the acquisition strategy, there are some price-related factors which you must also consider when you prepare the acquisition plan for FIP resources. These are called price-related factors because they can have a significant impact on the price of the acquisition.

These price-related factors are:

- Lease vs. purchase price;
 - Finance charges (for leasing of telecommunications equipment);
 - Government-furnished property costs;
 - Options;
 - Economic price adjustments;
 - Maintenance, training, installation, technical manuals, and supplemental supplies;
 - Power and cooling requirements;
 - Number of Government support personnel required;
 - Floor space;
 - Buy-in pricing; and
 - Software licenses.
-

Lease vs. Purchase Price

One price-related factor that you must always consider in the FIP resource acquisition plan is the relative advantage of leasing versus purchasing. It may often be in the Government's interest to lease rather than purchase a FIP resource. To make a lease versus purchase decision, you will follow much the same process as in the lease vs. purchase analysis for any other commodity.

FAR Subpart 7.4 OMB Circular A-94

Follow the guidance in FAR Subpart 7.4 and OMB Circular A-94, Section 13.c to determine the least expensive alternative for the Government.

You should base the decision on whether to lease or purchase on a case-by-case evaluation of comparative costs and related factors.

(continued on next page)

36.2 Price-Related Factors to Consider in a FIP Resource Acquisition Plan

(continued)

Lease vs.
Purchase
Minimum Factors
to Consider

FAR 7.401

At a minimum, you should consider the following factors in your lease vs. purchase analysis (FAR 7.401):

- estimated length of time the FIP resource will be used and the extent of use within that period;
 - financial and operating advantages of alternative types and makes of FIP resources;
 - cumulative rental payments for the estimated period of use;
 - net purchase price;
 - transportation and installation costs;
 - maintenance and other service costs;
 - potential obsolescence of the FIP resource because of imminent technological improvements
-

Possible Added
Factors to
Consider

In addition to the minimum factors already discussed, depending on the type, cost, complexity and estimated period of FIP resource use, *you might also want to consider the following added factors in your lease vs. purchase analysis:*

- availability of purchase options (such as lease with option to purchase—may not be offered);
 - potential for use of FIP resource by other agencies after use by the acquiring agency has ended (reuse);
 - trade-in or salvage value; and
 - availability of servicing capability (e.g., can the FIP resource be serviced by the Government or other sources if purchased?)
-

(continued on next page)

36.2 Price-Related Factors to Consider in a FIP Resource Acquisition Plan

(continued)

General Preferences

FAR 7.402

Although you should make a lease vs. purchase analysis on a case-by-case bases for each FIP resource acquisition, FAR 7.402 provides some guidance on general preferences:

- Purchase is generally appropriate *if the FIP resource will be used beyond the point in time when cumulative leasing costs will exceed purchase costs.* (Do NOT rule out purchase merely because technical advances might make the FIP resource less desirable).
- Lease is generally appropriate *if it is to the Government's advantage.* Lease may also serve as an *interim measure* when circumstances require *immediate* use of equipment to meet Government goals, but do not currently support acquisition by purchase.
- If a lease is justified, a lease with option to purchase (LWOP) is generally preferable.
- Generally, long-term leases should be avoided, but may be appropriate if an option to purchase or other favorable terms are included.

See Chapter 29, "Lease versus Purchase of FIP Resources."

Assistance on Lease vs. Purchase

FAR 7.403

If you need assistance in making a lease vs. purchase determination, the GSA can assist you. (See FAR 7.403.)

(continued on next page)

36.2 Price-Related Factors to Consider in a FIP Resource Acquisition Plan

(continued)

OMB Guidelines
for Lease vs.
Purchase

OMB Circular A-94

In addition to the FAR guidance, OMB Circular A-94, *Guidelines and Discount Rates for Benefit-Cost Analysis of Federal Programs* provides additional guidance. You should use A-94 guidance when BOTH of the following tests of applicability in the following table are met.

TWO TESTS OF APPLICABILITY FOR LEASE vs. PURCHASE	
Apply OMB A-94 Guidelines When	
1.	<p>The lease-purchase analysis concerns a capital asset including durable goods, equipment, buildings, facilities, installations, or land which:</p> <ul style="list-style-type: none"> -is leased to the Government for a term of 3 or more years; OR... -is new, with an economic life of less than 3 years and leased to the Government for a term of 75% or more of the economic life of the asset; OR... -is built for the express purpose of being leased to the Government; OR... -is leased to the Government and clearly has no alternative commercial use (e.g., a special purpose Government installation; <p>AND...</p>
2.	<p>Your lease-purchase analysis concerns a capital asset or a group of related assets whose total fair market value EXCEEDS \$1 MILLION.</p>

(continued on next page)

36.2 Price-Related Factors to Consider in a FIP Resource Acquisition Plan

(continued)

Finance Charges (for Leasing of Telecom- munications Equipment)

Leasing of telecommunications equipment is a very special case. The manufacturers of most telecommunications equipment prefer to lease, rather than sell many telecommunications equipment items because sale is not practical. Telecommunications equipment is really part of a very large network which is shared by many users, so many items of equipment that connect to the system are normally leased, rather than sold outright.

Therefore, if the acquisition concerns telecommunications, one of the special price-related factors that you must consider is the finance charges for leasing of telecommunications equipment. You should ask *“What will the finance charges be for leasing this telecommunications equipment?”* Generally, the longer the leasing period, the more favorable the rates.

Government- Furnished Property Costs

Government-furnished property costs are another price-related factor to consider in the acquisition plan. In many cases, the Government may offer to furnish the use of property as a part of the acquisition. In fact the installation and maintenance of the FIP resource may require long term use of Government furnished property by the vendor. The costs of this property may need to be factored into the overall acquisition plan and acquisition costs.

For example, the Government may provide maintenance work space, office equipment, telephone access, heating and air conditioning, and parts storage facilities to a contractor as part of an acquisition. The costs of this Government-furnished property must be identified and factored in to the acquisition cost. In some cases, it may be possible to negotiate and obtain a lower cost by offering such Government-furnished property as part of the acquisition strategy.

Options

FIRMR 201-39.5202-4

Options are another price-related factor that you may consider in the acquisition plan. FIRMR 201-39.5202-4 provides guidance on the evaluation of options. Because of the rate of technological advance and competition, it may be advantageous to ask for various options as part of the acquisition plan. Where options are to be considered, remember that the Government is not obligated to exercise any or all options. However, you should determine whether options should be part of the acquisition strategy and plan.

(continued on next page)

36.2 Price-Related Factors to Consider in a FIP Resource Acquisition Plan

(continued)

Economic Price Adjustments

An economic price adjustment is an adjustment to the price based on expected inflation or deflation. When estimating the expected price for a multiyear acquisition, make sure that you perform economic price adjustments to the base year for which prices are well known. For example, if you are procuring maintenance services over a three year period, you must calculate the maintenance prices three years into the future, starting with a known baseline of present maintenance service prices.

(See Chapter 28, “Benefit-Cost and Present Value Analysis.”)

Maintenance, Training, Installation, Technical Manuals, and Supplemental Supplies

One price-related factor which is sometimes not fully considered is the cost associated with activities such as *maintenance, installation, technical manuals and acquisition of supplemental supplies*.

As a rule, the longer the agency retains a FIP resource, the greater the costs for *maintenance*. Over time, excessive maintenance costs can even influence the decision to scrap an older resource and acquire a newer one. You should try to estimate the predicted costs for maintenance as accurately as possible. The maintenance costs will include both parts and labor. If the maintenance is to be done by Government personnel, there may be a hidden training cost, because Government personnel may require extensive training, either at the manufacturer’s facility or on-site.

Training costs, both for operation and maintenance, are another price-related factor which are easy to overlook. For example, there is often a training requirement when new software is introduced. During the training period, there may also be a loss of operational efficiency while Government personnel are learning to use the new software or hardware.

Installation is another price-related factor to consider. Often, installation and testing of new FIP hardware or software may cause some shutdown or delays in normal operation. This should be considered as a price-related factor.

(Topic continued on next page)

36.2 Price-Related Factors to Consider in a FIP Resource Acquisition Plan

(continued)

Maintenance,
Training,
Installation,
Technical
Manuals, and
Supplemental
Supplies
(continued)

Technical manuals (for operation and maintenance) are another price-related factor that represent a considerable cost. Usually, the offeror will provide “off-the-shelf” technical manuals. These are the cheapest, because there is no further development cost. However, for DOD acquisitions, the standards and Data Item Descriptions (DIDs) for technical manuals can be very stringent. DOD technical manuals and job aids must usually be tested and “validated” on a target audience of 30 or more persons with a statistical sample of 80% successfully performing the tasks described in the technical manuals without coaching. A requirement for validated manuals can lead to a considerable increase in cost.

For example, a contractor may have to spend months validating such manuals with a group of thirty or more members of the target audience provided by the Government. Therefore, you should ask if there will be a requirement for *validated* manuals, or manuals to be done to special specifications.

Supplemental supplies can be another factor which raises costs. Supplemental supplies are those consumable supplies, such as printer cartridges, paper and other consumable, which are needed for operation and maintenance. Supplemental supplies may be offered as part of the contractor’s maintenance effort. When this occurs, the contractor may charge an added overhead for acquisition and storage of these supplies, before reselling them to the Government. These supplemental supplies usually have a low per unit cost, but if used in large numbers, the annual cost can be considerable. Check to make sure that you are not acquiring supplemental supplies which might be procured more cheaply against the GSA schedules.

Therefore, you should ask questions such as, “*What impact will maintenance, training, installation, technical manuals and supplemental supplies have on the acquisition?*”

(continued on next page)

36.2 Price-Related Factors to Consider in a FIP Resource Acquisition Plan

(continued)

Power and Cooling Requirements

The installation of a new system, especially a large mainframe or supercomputer system, may require special power and cooling. In some cases, the installation will require significant and costly upgrades to the physical facility, or movement to another facility (such as another building). For example, large main frames and supercomputers will almost certainly require at least a special cooling system and some type of auxiliary power. These price-related factors must therefore be considered in the acquisition plan.

You should ask “*Will it be necessary to make any changes to power and cooling to accommodate the new FIP resource?*”

Number of Government Support Personnel Required

Another price-related factor that you should consider in the acquisition plan is the number of Government support personnel that will be required to support the acquisition and administration of the contract. It is easy to overlook the true requirements for the total number of Government personnel that may be required.

For example, assume you are acquiring a maintenance support service for several different sites from the same contractor. In this type of contract, the contractor submits requests for payment based on the number and frequency of visits to the different Government facilities in order to repair equipment in response to requests for maintenance. In this type of situation, it may be necessary to appoint several persons (points of contact) at the different Government sites to confirm requests for maintenance, monitor contractor performance, and confirm that the contractor actually showed up to perform the requested maintenance.

A second example: if you are installing a LAN for the first time, you will almost certainly have to have a Government person full-or part time to administer the LAN. That is a price-related factor to consider in the acquisition plan.

(Topic continued on next page)

36.2 Price-Related Factors to Consider in a FIP Resource Acquisition Plan

(continued)

Number of
Government
Support Personnel
Required
(continued)

Another example is the sometimes hidden requirement to provide Government personnel to validate and verify the accuracy of the operator and maintenance manuals. If required by the Government (as in many DOD acquisitions), this can require up to 30 Government personnel for weeks at a time. If these requirements for Government personnel are not considered, the real costs are underestimated in the acquisition plan.

In the acquisition planning for this type of contract, you should consider *what duties these individuals will be required to perform, how many Government persons will be required at each Government site, how much time (labor hours per month) they will spend monitoring the contractors and the hourly cost for doing so.* The designated COTR should be able to calculate this information and provide it to you.

Floor Space

Another price-related factor that you may have to consider in the acquisition planning is the requirement for floor space. In many acquisitions, this may not seem to be a factor, because the items to be procured (such as replacement desktop computers) are of the same size or dimensions as the equipment to be replaced. However, you should not overlook the space requirements imposed by the procurement, especially if there is to be any new equipment, such as scanners or LAN servers, that were not on hand before.

Procurement of very large computer systems and main frame computers or supercomputers often impose special floor space requirements that you must consider. For example, large mainframes may require special isolation and shielding, which can add greatly to the total floor space requirements. Some large mainframe computers require special cables and connectors that are mounted under a “false floor.” Some super-computers are now liquid-cooled and require considerable space just for the coolant to circulate. Any such requirements can add considerably to the cost of acquisition, such as alterations to the floor space, relocating personnel, and installation of walls. *Be sure to ask if the total floor space requirements have been considered.*

(continued on next page)

36.2 Price-Related Factors to Consider in a FIP Resource Acquisition Plan

(continued)

Buy-in Pricing

Another price-related factor that you should examine is the possibility of “buy-in pricing.” This is the practice by some contractors of intentionally providing a very attractive low price for the FIP equipment (such as computers) in order to “buy in” or secure the contract; then, the contractor can charge relatively high prices for follow-on maintenance and other support services over the life of the contract.

You can see that, on a long term contract, a contractor could recoup any losses on hardware and make a greater than usual profit on support services, if he/she does not have to worry about competition. For this reason, you should be aware of the possibility of buy-in pricing by any offeror.

One way to do this is to establish the “should cost” price through careful market research. Then, during the evaluation of offers, you should be suspicious of any offers which are significantly below that price and to check those very low offers for cost realism, relative to other offers. You should ask “*Does this acquisition allow an offeror to ‘buy in?’*”

Software Licenses

Another price related factor to consider in the acquisition plan is software licenses. Unless the Government already has (or will have) clear right to use needed software, it may cost thousands of dollars in additional costs to acquire the necessary software licenses. Once you have committed the Government to use certain hardware, you may be tied to certain software and it may be too late to obtain favorable licensing terms for the software that you will need.

Therefore, be sure to ask whether any additional software licenses will be required. If there will be a requirement for software licenses, be sure to plan for acquiring the least restrictive license for the Government. However, you must be able to calculate the “should cost” price of such licenses and add it to the total acquisition cost, based on your market research.

(Topic continued on next page)

36.2 Price-Related Factors to Consider in a FIP Resource Acquisition Plan

(continued)

Software Licenses (continued)

In some cases, you may find that the requiring agency can make use of “common-use software.” *“Common-use software means software that deals with applications common to many agencies, that would be useful to other agencies, and is written in such a way that minor variations in requirements can be accommodated without significant programming effort.”* For example, some Government agencies already use certain accounting or data base software that might be useful to other agencies with little or no programming. The advantage of using such software is that little or no additional costs would be required, compared to procurement of new software. So, you should ask *“Does any other agency already have software that can be used?”*

(Note - for a further discussion of licensing requirements, see Chapter 11, “Licensing Agreements for FIP Resources Acquisitions.”)

Summary Checklist

You can see that it would be easy to overlook a price-related factor that should be considered in the acquisition strategy and the acquisition plan. Unless you consider the types of price-related factors discussed in this chapter, your acquisition strategy might be faulty and you might place the Government at a disadvantage in the acquisition.

You can use the checklist for cost-related factors on the following page to summarize the price-related factors and the types of questions that you should ask.

36.2 Price-Related Factors to Consider in a FIP Resource Acquisition Plan

(continued)

SUMMARY CHECKLIST FOR PRICE-RELATED FACTORS IN ACQUISITION PLANNING

	Yes	No	N/A	Comments
1. Has Lease versus Purchase analysis been done?				
2. Will there be finance charges for leasing of telecommunications?				
3. Have you calculated Government-furnished property costs?				
4. Have you considered costs of options?				
5. Have you considered economic price adjustments?				
6. Have you considered maintenance, training, installation, technical manual and supplemental supply costs?				
7. Have you considered power and cooling requirements?				
8. Have you considered the number of Government support personnel required?				
9. Have you considered floor space requirements?				
10. Have you considered buy-in pricing?				
11. Have you considered software licensing requirements?				

SUMMARY

In this chapter, you learned to itemize and apply special factors in developing an acquisition strategy for FIP resources. In the next chapter, you will learn to classify what type of authority an agency has to acquire FIP resources and construct an agency procurement request in accordance with the FIRMR.

CHAPTER 37

PREPARING AN AGENCY PROCUREMENT REQUEST FOR A DELEGATION OF PROCUREMENT AUTHORITY

Chapter Vignette

“I was wondering,” Mark said, “when does the requiring activity get authority from the General Services Administration to move ahead with the procurement?”

“Well,” Marcia replied, “that depends on the type of delegation and on the type of agency procurement request. We should begin by talking about the various types of delegations of procurement authority and when you must prepare an agency procurement request. Did you know that these documents are often referred to as APRs and DPAs?”

Course Learning Objectives

At the end of this chapter, you will be able to:

Overall:

Describe the types of delegations of procurement authority and their thresholds and prepare an agency procurement request in accordance with the FIRMR.

Individual:

- 37.1 Define the terminology and types of delegation.
- 37.2 Explain the steps involved in deciding whether an APR is required.
- 37.3 Describe how to prepare an APR.
- 37.4 Explain GSA's actions, in general.

Chapter Overview

Scope

This chapter describes the types of procurement authority that agencies use when buying FIP resources. It also describes how to prepare an agency procurement request (APR) in accordance with the FIRMR for higher dollar value procurements.

Topics in This Chapter

This chapter includes the following topics:

SECTION	TITLE	PAGE
37.1	Background, Terminology, and Types of Delegations	37-4
37.2	Deciding if an Agency Procurement Request is Required	37-10
37.3	Preparing an Agency Procurement Request	37-12
37.4	GSA's Review and Delegation . . . And After	37-20

References

In order to understand the topics discussed in this chapter, you should have the following documents at hand:

- The FIRMR, especially FIRMR 201-20.305, and
 - FIRMR Bulletins A1, C-5 and C-7.
-

37.1 Background, Terminology, and Types of Delegations

Background

As you learned in Chapter 1, *Statutes that Apply to the Acquisition of FIP Resources*, the law gives GSA essentially *exclusive authority* to procure FIP resources. In Chapter 15, *Determination of Acquisitions Covered by the FIRMR*, you learned that the term “FIP resources” is *very broad*, covering many types of resources.

Given this broad, exclusive authority, GSA has chosen to delegate procurement authority for *most* acquisitions to agencies, rather than conduct all the Government’s procurements. This decision required GSA to develop methods, rules, and even new terminology for delegating authority to agencies, such as:

- Delegation of Procurement Authority,
- Regulatory Delegation,
- Specific Agency Delegation,
- Specific Acquisition Delegation (including Trail Boss DPA), and
- Agency Procurement Request.

Another term important to the delegations process is “Designated Senior Official.”

(continued on next page)

37.1 Background, Terminology, and Types of Delegations *(continued)*

Delegation of Procurement Authority

Delegation of Procurement Authority (DPA) is a term that refers to GSA’s formal assignment to other agencies of its statutory authority to acquire “ADPE” (defined to include services and telecommunications). GSA delegates authority in three ways:

- Regulatory Delegations,
- Specific Agency Delegations, and
- Specific Acquisition Delegations.

Regulatory Delegation

FIRMR 201-20.305-1

The first type of delegation of procurement authority is the ***regulatory delegation***, sometimes referred to as a “blanket DPA.” *If your acquisition meets the conditions for a regulatory delegation, you do not need to submit an agency procurement request to GSA.* Your agency automatically has authority under regulation to buy the resource.

GSA’s regulatory delegations fall in three categories:

- FIP-related supplies regardless of cost,
- Acquisitions under GSA’s mandatory-source programs, such as FTS2000, and
- Acquisitions at or below *regulatory thresholds set in three tiers* depending on agencies’ IT budgets and past performance.

(Topic continued on next page)

37.1 Background, Terminology, and Types of Delegations *(continued)*

Regulatory
Delegation
(continued)

GSA's provisions are summarized in the table below.

Note: For a threshold decision, use the total of all FIP resources life cycle dollars

AGENCIES' REGULATORY AUTHORITY				
For Acquisition of:	And:	And:	By Agencies	
			For:	Does Not Exceed:
FIP equipment, software, services, support services, related supplies, and systems:	Does <i>not</i> include telecom requirements within scope of FTS2000 or GSA's CLTS program or at a site where another agency has a telecom switching function, <i>or</i> Agency has an exception to the use of FTS2000 or CLTS, <i>or</i> Includes Telecom resources which will be acquired through FTS2000 or CLTS program:	When the total estimated dollar value (including all optional items and periods over the system's life) under a single contract action:	Department of Defense/Office of the Secretary of Defense; Department of the Air Force, Army, Energy, Health and Human Services, Navy, Transportation, Treasury; and NASA	
			Competitive acquisition	\$20,000,000
			Specific make and model or only one responsible source acquisition	\$2,000,000
			Departments of Agriculture, Commerce, Interior, Justice, State, and Veterans Affairs; EPA; and GSA:	
			Competitive acquisition	\$10,000,000
			Specific make and model or only one responsible source	\$1,000,000
			All Other Agencies:	
			Competitive acquisition	\$5,000,000
			Specific make and model or only one responsible source	\$500,000
			Exceptions:	
<ul style="list-style-type: none">• Stand-alone buys of FIP-related supplies regardless of cost• FTS2000 Program resources• Consolidated Local Telecommunications Services (CLTS) Program resources• Financial Management Systems Software (FMSS) Multiple Award Schedule Contract resources• Other GSA Information Resources Management Service (IRMS) multiagency services and contracts*• Acquisition of local regulated telephone services				

*Unless contract will be turned over to agency after award [as is done with acquisitions conducted by GSA's Federal Computer Acquisition Center (FEDCAC)].

37.1 Background, Terminology, and Types of Delegations *(continued)*

Regulatory Delegation (continued)

Note that the conditions in the second column (upper part of table) refer to one of two restrictions:

- Agencies can't bundle requirements that could be met through the FTS2000 or CLTS programs with other requirements to avoid GSA and use another source, and
- Agencies cannot use the regulatory threshold to buy telecommunications facilities or services for use at a site where another agency has a switching function.

These conditions support two fundamental GSA policies. First, agencies must use mandatory sources for telecommunications resources—or obtain an exception. (The resource can't be hidden or bundled to avoid this requirement.) Second, GSA approves telecommunications switching functions by site not agency. When several agencies occupy a building or site, GSA normally designates the largest to provide switching for all Federal users at the site.

One final condition applies. FIRMR 201-20.305 indicates that agencies “shall not fragment requirements for FIP resources in order to circumvent established delegations of procurement authority thresholds.”

Specific Agency Delegation

FIRMR 201-20.305-2

The second type of delegation of procurement authority is the ***specific agency delegation***. This type of delegation modifies for one agency (or part of an agency) the Governmentwide regulatory delegations.

GSA grants specific agency delegations (the delegation of procurement authority) based on the results of special, comprehensive reviews called Information Resources Procurement and Management Reviews (IRPMRs). These reviews determine whether an agency has policies, procedures, practices, and people in place to effectively, efficiently, and economically acquire and manage FIP resources in accordance with regulation and best practices. Following an IRPMR, GSA may either increase, decrease, or confirm the regulatory threshold for that agency.

(continued on next page)

37.1 Background, Terminology, and Types of Delegations *(continued)*

Specific Acquisition Delegation

FIRMR 201-20.305-3

The third and best known type of delegation authority is the ***specific acquisition delegation***. When someone refers to a DPA, they usually mean a specific acquisition delegation.

If the value of your acquisition exceeds your agency's threshold or does not meet the conditions of the regulatory or specific agency delegation, you must prepare an agency procurement request (APR) for a specific acquisition delegation. As the name suggests, an APR is specific to a single acquisition, as is the ensuing delegation. The guidelines for preparing an APR are in FIRMR Bulletin C-5.

There is a special type of specific acquisition delegation referred to as a **"Trail Boss DPA."** The Trail Boss is a high-level, highly trained and experienced acquisition executive formally designated by an agency to manage a major, mission-essential acquisition. Participation in the program is optional for the agency, but subject to GSA's approval.

For example, an agency may have a very complex or highly specialized FIP resources acquisition, such as modernization of tax or social security systems. In such cases, the agency may appoint a "Trail Boss" to head the acquisition effort, overseeing programmatic, technical, and contracting functions.

The benefits of the Trail Boss program to the agency include approval (by specific acquisition DPA) very early in the acquisition process and GSA's support throughout the acquisition. FIRMR Bulletin C-7 provides information on the program, including instructions for preparing a Trail Boss APR.

Agency Procurement Request

The Agency Procurement Request is a document submitted by an agency to GSA requesting a DPA for the acquisition of specific FIP resources, including systems, equipment (hardware), software, services, and support services (including maintenance).

FIRMR 201-20.305 and FIRMR Bulletins A-1, C-5 and C-7 contain the procedures you should follow in preparing an APR. You will learn more about APRs later in this chapter.

(continued on next page)

37.1 Background, Terminology, and Types of Delegations *(continued)*

Designated Senior
Official

FIRMR 201-4.001

The Designated Senior Official (DSO) is that person in an executive agency who is responsible under the *Paperwork Reduction Act* for carrying out the agency’s information resource management functions—or who is the senior IRM official designated by the agency head of an agency not subject to the *Paperwork Reduction Act*—to be responsible for acquisitions under a delegation of procurement authority.

Contracting
Officer Role

You must insert the FIRMR provision: 201-39.5202-3, Procurement Authority, in all solicitations for FIP resources.

37.2 Deciding if an Agency Procurement Request is Required

When to Submit an APR

When agencies are acquiring FIP resources, they must determine early in the acquisition process whether they must complete an APR for a specific acquisition delegation. This is because, with few exceptions (one of which is Warner Amendment buys), *agencies do not have authority under the law to acquire FIP resources.*

You learned in Chapter 15, *Determination of Acquisitions Covered by the FIRMR*, how to decide whether the FIRMR applies to a given procurement. This is the first decision you must make when deciding whether to prepare an APR. If the FIRMR does *not* apply, you do *not* need to be concerned about a delegation of any kind. However, if the FIRMR does apply, you continue with the decision-making process.

If your acquisition is subject to the FIRMR, your next step is to determine whether your agency has a specific agency delegation. You can determine this by contacting your IRM office or the office of your Designated Senior Official (DSO). You can also find out by calling GSA's Acquisition Reviews Division at (202) 501-1566 (FTS and commercial) and asking for your agency's desk officer. [GSA plans to post the information in the future, probably on GSA's electronic bulletin board at (202) 208-7484.]

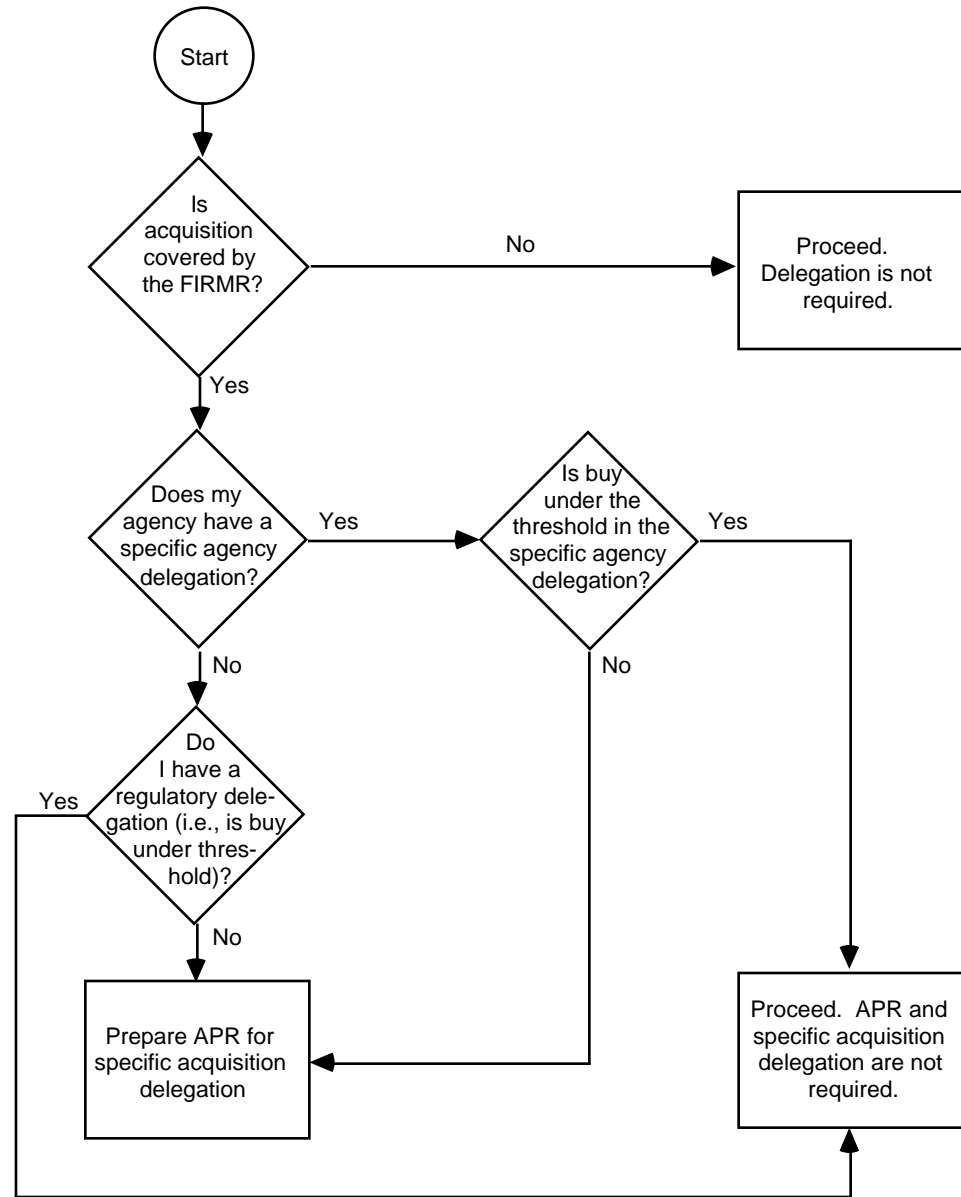
If your agency does not have a specific agency delegation, you refer to the regulatory delegations, described in the previous section.

(Topic continued on next page)

37.2 Deciding if an Agency Procurement Request is Required

When to Submit
an APR
(continued)

The flow chart below outlines the steps you should follow to determine if you must prepare an APR.



37.3 Preparing an Agency Procurement Request

Who Can Submit
an APR?

Not everyone can submit an APR to GSA. GSA requires each agency's DSO to provide a list of officials authorized to submit APRs. GSA's delegations desk officers screen every APR to be sure that it is an authorized submission.

Many agencies have implementing rules for submission of APRs. In fact, *most agencies even set up internal thresholds that may apply to you in addition to GSA's.* So you will need to check with your IRM office to determine the proper channels and procedures.

When to Submit
an APR

Agency procurement requests are submitted after all pre-procurement studies—such as the requirements analysis, alternatives analysis, benefit-cost analysis, and conversion study—are complete, but *before release of the solicitation.* FIRMR 201-39.5202-3, *Procurement authority*, requires agencies to identify the type of delegation and, for specific acquisition delegations, GSA's case number in the solicitation.

The exception is submission of Trail Boss APRs. These are submitted very early in the planning phase, during conceptual planning.

Preparing an APR

You should prepare an APR following GSA's and your agency's guidance. The following sections outline GSA's submission requirements (in italicized type) for regular and Trail Boss DPAs and briefly explain the requirement (in regular text).

37.3 Preparing an Agency Procurement Request *(continued)*

Regular APRs

1. Agency information.

a. Agency name, address, and location where FIP resources will be installed or services will be performed.

b. Names, titles, organizations, and telephone numbers of senior program, technical, and contracting officials assigned to the acquisition and description of the organizational structure supporting these individuals.

c. For acquisitions at or above \$25 million, for officials in b:—

(1) Experience in previous major FIP resources acquisitions.

(2) Responsibilities, scope of authority, and reporting structure with respect to the acquisition.

(3) Whether assignment to the acquisition is full or part-time and, if part-time, the nature of other responsibilities.

GSA places great importance on management structure and the abilities and experience of those conducting the procurement. GSA desk officers sometimes call the individuals identified in the APR directly to resolve questions.

2. Project title and description.

Identify the project title and briefly but specifically describe the primary agency programs that the FIP resources will support. The overall relationship of the proposed acquisition to the agency's mission should be evident.

3. Current support.

Briefly but specifically describe the FIP resources now supporting the program or programs. Indicate the deficiencies in current support—such as inadequate capacity or an expiring contract—that necessitate the procurement. If there is no current support, describe the basis for the new requirement.

(Topic continued on next page)

37.3 Preparing an Agency Procurement Request *(continued)*

Regular APRs
(continued)

4. *FIP resources to be acquired.*

Briefly and generally describe the FIP resources to be acquired during the contract life. When describing requirements, remember that the DPA will be limited in its scope by the APR. For example, “nationwide network with regional nodes” is descriptive and does not limit delegated authority as would “LAN servers for twelve sites.” If telecommunications resources are involved, you should indicate whether GSA’s mandatory telecommunications program sources will be used and, if not, why not. This section also requires you to address such areas as system expansion, augmentations, upgrades, and similar changes during the contract life.

5. *Contracting approach.*

- a. *Is requirement specific make and model or compatibility-limited?*
- b. *Planned milestones (fiscal year and quarter) for release of the solicitation and contract award.*
- c. *If pilot or prototype, the strategy for the follow-on implementation phase.*
- d. *Does acquisition plan [FAR 7.104(c)] contemplate contracting under:*
 - (1) *Full and open competition (FAR Subpart 6.1),*
 - (2) *Full and open competition after exclusion of sources (FAR Subpart 6.2), or*
 - (3) *Other than full and open competition (FAR Subpart 6.3). If other than full and open competition, provide statutory contracting authority (described in FIRM Subpart 201-39.6 or FAR 6.302-1 through 6.302-7).*

(Topic continued on next page)

37.3 Preparing an Agency Procurement Request *(continued)*

Regular APRs
(continued)

Describe the contracting approach in some detail, taking care to provide enough information so that the approach seems reasonable and justified. If the acquisition is for a pilot or prototype, address the means of ensuring competition for the follow-on procurement. If additional information may clarify why competitiveness is limited, you should explain the circumstances to avoid delays in GSA's processing of the APR.

6. *Estimated contract life and cost.*

Identify the planned contract life with all optional periods. In addition, provide an estimated contract cost that includes all anticipated optional quantities, resources, and periods. FIRMIR Bulletin C-5 requests that agencies break down costs by categories, including FIP equipment, FIP software, FIP services, FIP support services, FIP-related supplies, total FIP resources, total other-than-FIP resources, and total contract cost. (In practice, agencies do not always do so.)

It is important to accurately project contract life and cost because the delegation of procurement authority is limited to the costs and years indicated in the APR.

7. *Regulatory compliance.*

a. *Provide a statement that the agency has reviewed and complied (or will comply) with all applicable regulations or list (with explanation) the deviations from the regulations that apply.*

(Topic continued on next page)

37.3 Preparing an Agency Procurement Request *(continued)*

Regular APRs
(continued)

b. Provide the date of completion or most recent update of the following documentation or indicate not applicable:

- *Requirements analysis,*
- *Analysis of alternatives,*
- *Determination to support compatibility-limited requirements,*
- *Conversion study,*
- *Certified data to support a requirement available from only one responsible source,*
- *Certified data to support a requirement using a specific make and model specification,*
- *Description of planned acquisitions to foster competition for subsequent acquisitions,*
- *Justification for more than one agency to provide switching facilities or services at building locations,*
- *Exception to the use of FTS-2000 mandatory network services, and*
- *Exception to the use of GSA local telecommunications service mandatory switching services.*

Although this section is sometimes taken lightly, you should verify any information you submit. GSA may question why you have indicated “not applicable” or may ask for one of these documents. You do not want to be surprised by finding out that the requiring activity really hasn’t completed the conversion study that it said it finished last year. (A GSA official once referred to these documents as “vapor paper.”)

8. Agency remarks.

You can use this section to provide additional information or special conditions, such as the need for building construction or modification by GSA or for multiyear contracting authority for telecommunications resources (as provided in FIRMR 201-20.306).

9. Agency / GSA references.

Cite related GSA delegations (including case numbers), meetings, telephone discussions, and similar information in this section.

(Topic continued on next page)

37.3 Preparing an Agency Procurement Request *(continued)*

Regular APRs (continued)

10. Authorization.

Include the agency-authorized signature, position title, organization, and date. The individual cited in this section must be on GSA's list in order for the APR to be processed.

11. Performance Measurement.

GSA now requires additional information that is not included in FIRMR Bulletin C-5 (dated January 30, 1991). Agencies must "justify their information technology acquisition requirements in terms of functional and measurable outcomes." Examples of outcomes include faster delivery of service to the client, reduction of billing time, or reduction of agency expenditures.

Most agencies, in the course of planning a major systems acquisition, have definite objectives that the acquisition should fulfill. These objectives should be specific and measurable and can serve as the basis for "performance metrics" (as GSA has called them) in the delegations process. GSA has advised in the past that performance metrics should address quality, timeliness, and price. Agencies sometimes discuss these measures with GSA before submission.

Trail Boss APRs

An agency may, at its option, submit a Trail Boss agency procurement request to GSA for an acquisition that:

- Is in the early conceptual or requirements analysis stage,
- Seeks full and open competition,
- Is critical to the agency's mission,
- Is in the agency's five-year information technology plan, and
- Has the support of senior program, technical, and contracting officials.

Generally speaking, agencies hold discussions and briefings with GSA before nominating an acquisition (by APR) for the Trail Boss program. As set forth in FIRMR Bulletin C-7, a Trail Boss APR includes the following information.

(Topic continued on next page)

37.3 Preparing an Agency Procurement Request *(continued)*

Trail Boss APRs
(continued)

1. Agency Information.

This section includes agency name, address, primary location of the FIP system, and the position title, telephone number, and organizational identity of the Trail Boss and Deputy Trail Bosses designated to conduct the acquisition.

2. Program Title and Description.

This section indicates the program title and briefly but specifically describes the major agency program the acquisition will support, current FIP resources, and the major elements required to support the program during its system life.

3. Estimated Acquisition Costs.

The DPA is limited by the estimated overall cost of the contract action provided by the agency in this section.

4. Major Milestones.

This section lists major milestones for the life of the acquisition.

5. Regulatory Compliance.

This section provides a statement that the agency will comply with all applicable regulations or obtain a deviation.

6. Agency Remarks.

This section is used for additional information or special conditions necessary for GSA to understand the APR.

7. References.

Agencies cite relevant past GSA guidance, meetings, briefings, and telephone discussions concerning the acquisition.

8. Agency Signature.

A Trail Boss APR must be signed by the agency's DSO or designee.

(Topic continued on next page)

37.3 Preparing an Agency Procurement Request *(continued)*

Trail Boss APRs
(continued)

9. Trail Boss Charter.

FIRMR Bulletin C-7 provides detailed guidance on the contents of the Trail Boss Charter. It addresses purpose, Trail Boss status and line of authority, designation of Trail Boss Program participants and delineation of authority, acquisition support team, responsibilities of the Trail Boss, and statement of agency commitment.

10. Qualifications of the Trail Boss.

FIRMR Bulletin C-7 also provides detailed guidance on knowledge, experience, and education qualifications as well as considerations for selecting a Trail Boss.

11. Performance Measurement.

As described in the previous section, GSA now requires performance goals when delegating authority.

Submission of
APRs

FIRMR Bulletin C-5 dated January 30, 1991, does not conform to current practices. The obsolete provisions are those that detail mail and fax addresses for submitting APRs. Effective August 1, 1994, GSA no longer accepts APRs except by electronic submission to a restricted portion of its bulletin board system. Authorized submission officials establish an account with GSA before their first submission. If you are authorized by your agency's DSO to submit APRs and do not yet have an account, you need to contact GSA's Acquisition Reviews Division at (202) 501-1566.

37.4 GSA's Review and Delegation . . . And After

Acknowledgement of Receipt

FIRMR Bulletin C-5 indicates that GSA will provide, within three days of receipt of the APR, verification that identifies the date of receipt, the name and telephone number of the person handling the APR, the file and case number, the day the 20-workday clock expires (discussed below), and other pertinent information.

GSA's Actions

In response to an APR, GSA will either:

- Delegate authority to the agency to conduct the contracting action,
- Delegate authority to the agency to conduct the contracting action with provision for GSA to participate,
- Provide for contracting by GSA or otherwise satisfy the requirement on behalf of the agency,
- Suspend the request and ask for further information, or
- Deny procurement authority.

In most cases, GSA delegates procurement authority within the 20-workday timeframe cited in FIRMR Bulletin C-5, paragraph 13.

Suspensions for additional information are not unusual. Contracting by GSA for agencies, and denials, are rare.

Suspensions for Additional Information

Some APRs for “significantly large or complex acquisitions” or with “significant compatibility-limited requirements” are reserved by GSA for comprehensive review. From GSA’s perspective, this means acquisitions of around \$100 million or 25 percent of the agency’s information technology budget.

When GSA receives such an APR, it suspends the 20-workday clock and asks for more information from the agency. This typically includes all the pre-procurement studies cited in the APR, the solicitation document, and the project plan. GSA may take several months or more to review an acquisition of this significance.

(continued on next page)

37.4 GSA's Review and Delegation . . . And After *(continued)*

Conditions in Delegations

When GSA delegates authority, it typically does so with conditions. There are a number of boilerplate terms that appear in all delegations, such as providing for full and open competition.

You are obligated to comply with the conditions in delegations of procurement authority. If you do not, your DPA may be void.

Changes in APR Terms

What happens if conditions change from that which you reported to GSA in your APR? Suppose, for example, that you indicated that the acquisition would be competitive and now, after receiving your delegation, you discover that there is only one responsible source. Or suppose that you report an estimated contract value of \$25,000,000 and proposals are evaluated at \$30,000,000 and up. Is your DPA still valid? In a word, no.

When conditions change from that in your APR, you must submit an amended APR to GSA. Otherwise, your DPA may be void.

The 20-Day Clock and Automatic Delegation

FIRMR Bulletin C-5 paragraph 13 indicates that if GSA does *not* answer an APR within 20 workdays (plus 5 calendar days for mailing time) then agencies can proceed with the FIP acquisition as though it had received a delegation.

In practice, this rarely if ever occurs because GSA will suspend a case rather than let the “clock run out.” Further, agencies typically choose not to exercise this authority, regarding such an action as imprudent and potentially confrontational with GSA.

Appeal to OMB

If an APR for a specific acquisition is denied, the agency head may submit a written appeal to the Director, Office of Management and Budget. OMB reviews both the agency's rationale and GSA's reasons for denial before issuing a judgment. Appeals to OMB are very, very rare. Nonetheless, you should know that you can appeal a denial.

Role of Contract Specialist

The contract specialist shall insert a clause substantially the same as that found in FIRMR 201-39.5202-3, Procurement Authority, in all solicitations when a delegation of procurement authority is required.

SUMMARY

In this chapter, you learned about the types of authority an agency has to acquire FIP resources and how to construct an agency procurement request in accordance with the FIRMR. In the next chapter, you will learn about appropriate technical factors for inclusion in the RFP (sections C, L, M). These are determined by the source selection methodology selected.

CHAPTER 38

SOURCE SELECTION FOR FIP RESOURCES

Chapter Vignette

Marcia was continuing her briefing for Mark on FIP resources acquisition. “I think that it is about time we looked at the source selection process for FIP resources,” she said.

“I think that you will find it is a bit different from what you might have done in the past. In a FIP resources acquisition,” she continued, “you have to think about the acceptance criteria, the testing criteria for capability and performance validation, effectiveness level, past performance, and the trade-offs that are available. Of course, you will have technical help in considering the purely technical aspects, but the hard choices and recommendations are more of a contracting problem area than a technical problem area.”

Course Learning Objectives

At the end of this chapter, you will be able to:

Overall:

Predict the appropriate technical factors for inclusion into the RFP (sections C, L, and M).

Individual:

- 38.1 Explain source selection.
- 38.2 Explain and use various source selection methodologies.
- 38.3 Explain the unique considerations for a FIP Resources Source Selection
- 38.4 Identify components of a Source Selection Plan

Chapter Overview

Scope

This chapter discusses source selection for a FIP resources acquisition and how to predict the appropriate technical factors for a inclusion in the RFP sections C, L, and M. It discusses the major source selection methodologies, including lowest price-technically acceptable and best value.

It also explains the unique considerations for source selection of FIP resources, including

- acceptance criteria;
- testing criteria (capability and performance validation);
- effectiveness level;
- past performance; and
- trade-offs.

Topics in This Chapter

This chapter includes the following topics:

SECTION	TITLE	PAGE
38.1	Overview of Source Selection	38-4
38.2	Source Selection Methodologies	38-13
38.3	Unique Considerations for a FIP Resources Source Selection	38-20
38.4	Source Selection Plan	38-27

References

You may need several key references and documents to perform the actions discussed in this chapter. These include:

- FAR Part 15, especially Subpart 15.6 on Source Selection;
- FAR Part 34 on Major System Acquisition;
- FAR Part 39 on Acquisition of Information Resources;
- FIRMR Part 20 on Acquisition;
- FIRMR Part 201-24 on GSA Mandatory Programs;
- FIRMR 201-39 on Acquisition of FIP Resources by Contracting;
- OMB Circular A-109, *Major System Acquisitions*;

38.1 Overview of Source Selection

Introduction

FAR 15.6

You will recall that the definition of source selection is “*the process of soliciting and evaluating offers for award in a competitive environment*” (FAR 15.6). This section presents a brief overview of source selection, so you will be able to explain source selection as it applies to a FIP resource acquisition.

Relationship to the FAP

The table on the next page shows the relationship of source selection activities to the overall Federal Acquisition Process (FAP).

Importance of the Acquisition Plan

You will recall that much emphasis is placed on the acquisition planning process and the acquisition plan. In a FIP resources selection this is critical. The source selection plan and the source selection will rely heavily on the effectiveness of the acquisition plan. If acquisition planning is defective, the source selection process, by itself, cannot make up for the defects.

This means that the contract specialist must carefully examine the acquisition plan and ensure that it is fully understood, addresses the requirements and examines all life cycle costs, not just immediate acquisition costs, and does not contain any unnecessary restrictions on competition. (See Chapter 35, “*Preparation of an Acquisition Plan.*”)

Source Selection Documentation

The source selection process produces a number of key documents, and you should understand the relationship among them. The relationship is shown on page 38-6.

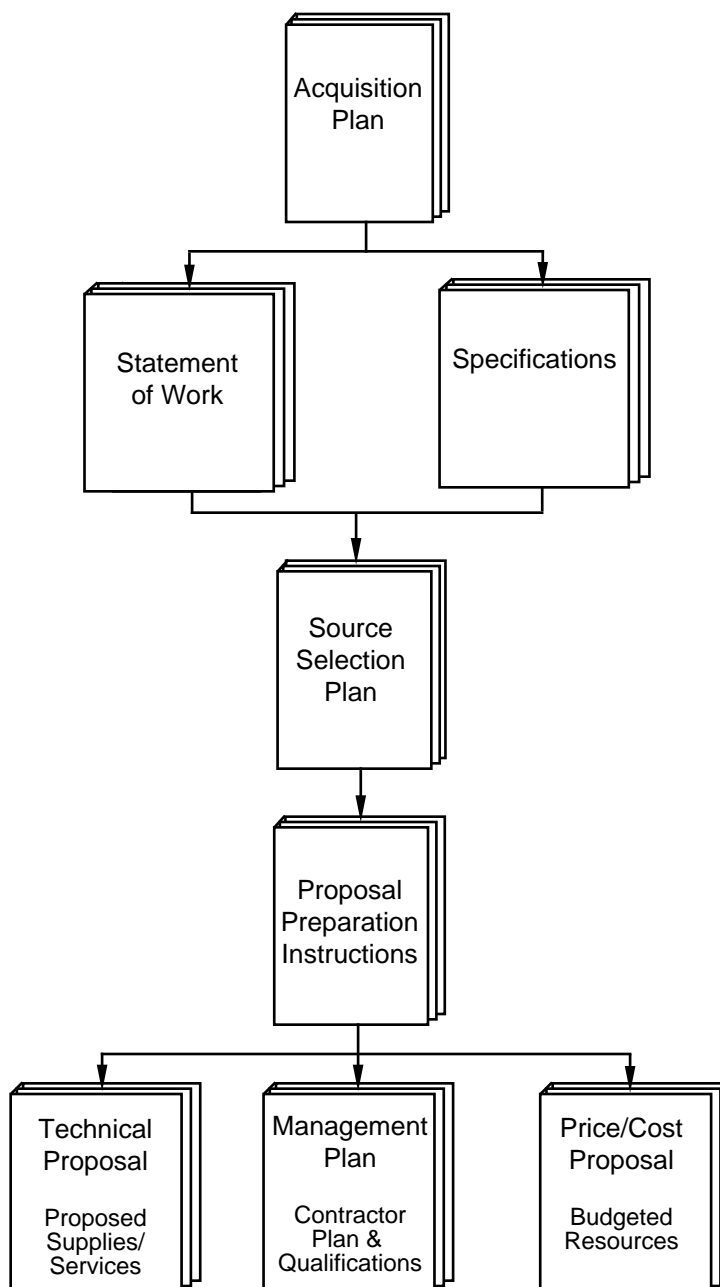
It is essential that you maintain complete documentation of the source selection process, in the event that the an offeror later demands a debriefing, because:

1. FAR 15.1003 provides for an offeror to receive such a debriefing on request; and
 2. You may need these documents later against a protest.
-

Phases of the FAP

ACQUISITION PHASE	SOURCE SELECTION PROCESS	SOURCE SELECTION ACTIVITIES
Pre-Solicitation	Develop Acquisition Plan	Develop Acquisition Plan
	Develop Source Selection Plan	Develop the Source Selection Plan and appoint the SSEB
	Obtain Reviews, Approvals, and Authorization	Request/Receive Agency-level Reviews/Approval
Solicitation	Prepare and Issue Solicitation	Write the Solicitation
		Develop an Independent Government Estimate
		Obtain Industry Comments on the Draft Solicitation (optional)
		Develop detailed Source Selection Materials
		Publicize the Solicitation in the <i>Commerce Business Daily</i>
		Issue the Solicitation
		Hold Preproposal Conference (optional)
		Answer Questions and Amend the Solicitation
Evaluation	Evaluate Proposals	Train Source Selection Team
		Receive Proposals
		Determine Whether Proposals Comply with Solicitation Instructions
		Evaluate Proposals Against Minimum Mandatory Requirements
		Request Clarification or Correction
		Rate Technical Proposals
		Conduct Initial Cost Evaluation
		Establish Competitive Range
Award	Select Contractor	Conduct Discussions and Negotiations
		Request Best and Final Offers (BAFOs)
		Rerate Proposals Based on BAFOs
		Select the Apparent Winner
		Conduct Responsibility Reviews
		Approve the Selection
		Award the Contract
		Notify Unsuccessful Offerors
		Debrief Offerors
Post Award	Contract Administration	Publicize the Contract

Source Selection Documentation



38.1 Overview of Source Selection *(continued)*

Formal or
Informal Source
Selection

You will also recall that source selection can be either *informal* or *formal*.

Informal source selection occurs when the contracting officer makes the selection alone or with the assistance of a technical advisor panel.

FAR 15.612(a)

Formal source selection occurs “when the specific evaluation group is established to evaluate proposals and select the source for contract award” (FAR 15.612(a)). In this chapter, and in most complex FIP resource acquisitions, the emphasis will be on formal source selection.

You will find that source selection for FIP resources is much like source selection for other major commodities with which you have had experience, but there are some differences and areas of emphasis that you should understand.

Applicability of the
Source Selection
Process

The formal source selection process may apply to a FIP resource acquisition for negotiated contracting when the source selection is based on:

1. Cost or price competition between proposals that meet the Government’s *minimum requirements* stated in the solicitation

OR

2. Competition involving an evaluation and comparison of cost or price and other factors.

(continued on next page)

38.1 Overview of Source Selection *(continued)*

Objectives of Source Selection

In a FIP resource acquisition, the **objectives of source selection are to support the goals of the overall Federal acquisition process.**

These objectives are:

- evaluation of the *quality and ability to produce* the supplies or services relative to price;
- determination of the *technical and management capability* of the offeror;
- determination of the offeror's *past performance* in providing supplies or services; and
- determination of which offer will be *most advantageous* to the Government.

This means that you must ensure that the acquisition plan, the acquisition strategy, the source selection plan, the evaluation factors, and the instructions to the offerors in Sections L and M for the FIP resource acquisition all support these source selection objectives.

Purposes of Source Selection

You may recall from previous instruction that the source selection process has certain purposes. FAR 15.603 states that the purposes of source selection are as shown in the following table.

PURPOSES OF SOURCE SELECTION
<ul style="list-style-type: none"> • Maximize competition; • Minimize the complexity of the solicitation, evaluation and selection decision; • Ensure impartial and comprehensive evaluation of all proposals; and • Ensure selection of the source whose proposal has the highest degree of realism and whose performance is expected to best meet stated Government requirements.

(continued on next page)

38.1 Overview of Source Selection *(continued)*

Maximizing Competition

The first purpose, maximizing competition, is sometimes more difficult in a FIP resource acquisition than in the acquisition of other commodities. That is because of the proprietary nature of the computer operating systems, various telecommunications patents and proprietary software (see Chapter 12). *Therefore, you must be especially careful to ensure that the technical requirements do not unnecessarily restrict competition.*

As a contract specialist or contracting officer in a FIP resource acquisition, the way that you can best maximize competition is to check the acquisition plan and source selection plan and make sure that any sole source, or specific make and model requirements are really necessary. Of course, you will include these if they are necessary, but check with the technical experts to determine if that is really the case.

Also, if there is doubt that requirements have been written to be unduly restrictive, you should consider obtaining industry comments before issuing the solicitation.

Minimizing Complexity of the Evaluation

The second purpose of source selection procedures is to minimize complexity of the evaluation. Source selection in some FIP resource acquisitions can be very complex even for the best informed technical experts. For this reason, it is important that you accomplish the following:

- Ensure the *minimum requirements are specific and well identified*, so that even nontechnical personnel can understand what is needed. If you do not understand something in the acquisition plan, ask questions and do not be afraid to require simplifications and enhancements, until the source selection plan is comprehensive and understandable.
- Remember the *preference for commercial-off-the-shelf (COTS) FIP resources*, whenever possible, to eliminate or minimize difficult and expensive development phases of the acquisition. Also, whenever possible, consider the existing mandatory-for-use and mandatory-for-consideration sources, to avoid complexity.
- Remember that, wherever possible, *a software solution is usually preferable to a hardware solution*. Hardware solutions tend to be more expensive in the long run and have the added disadvantage of “locking in” reliance on one supplier or contractor.

(Topic continued on next page)

38.1 Overview of Source Selection *(continued)*

Minimizing Complexity of the Evaluation (continued)

- *Make sure that risks and costs are fully addressed.* The source selection plan and the evaluation process should examine not only probable acquisition costs, but also long term life cycle costs for activities such as training, upgrades, maintenance, and eventual phase out and disposal. The tradeoffs among various offers must also be understood.
 - Make sure that the evaluation factors and the scoring system is *valid and reliable*, so that evaluators can apply the factors fairly and uniformly. If technical evaluators require outside (non-Government) assistance, because of the technical difficulty of the evaluation, identify the need as early as possible to avoid delays. Remember, one major cause of protests in FIP source selection is the use of factors which appear to be arbitrary, or favor one offeror. (See Chapter 40, “Developing the Solicitation.”)
 - Consider a *page count limitation*. One thing that makes technical evaluation difficult is the large number of pages and redundancies required in some solicitations. Check with the technical evaluators and consider whether it is feasible to limit offerors to a reasonable limit, such as 50 or 100 pages, to explain the technical approach.
-

Organization for Source Selection

In many ways, the organization for a formal source selection in a large scale FIP resources acquisition is like that for other complex acquisitions. The organization for a FIP resources source selection may include the Source Selection Authority (SSA), the Source Selection Advisory Council (SSAC), and source selection evaluation board (SSEB). In addition, there may be several panels of technical experts to serve as advisors to the SSEB during source selection. Finally, there may be a “Trail Boss” appointed to oversee the entire acquisition.

SSA

There will usually be a Source Selection Authority, from at least one management level above the contracting officer, to provide guidance to the contracting office and to make the final source selection, based on the recommendations and trade offs which you will present. (Note that, if a Trail Boss is assigned, the Trail Boss will be delegated to carry out these SSA functions.)

(continued on next page)

38.1 Overview of Source Selection *(continued)*

Source Selection Advisory Council (SSAC)

The appointment of a Source Selection Advisory Council is *optional* and at the discretion of the SSA. If an SSAC is appointed, it reviews the evaluation of the Source Selection Evaluation Board Council and, if requested, makes a recommendation to the SSA.

In a complex FIP resource acquisition, it is often advisable to use a SSAC. These persons are often able to review the conclusions of the SSEB and provide a higher level point of view to the SSA. For example, the SSAC might be in a better position to explain the SSA how the life cycle of a particular FIP acquisition will mesh or conflict with other planned acquisitions. This type of information might be beyond the pure technical evaluation of the SSEB.

Source Selection Evaluation Board (SSEB)

The SSEB is made up of carefully-selected specialists who are responsible for developing the source selection plan and for reviewing proposals in accordance with the source selection plan and the conditions stated in the RFP.

Trail Boss

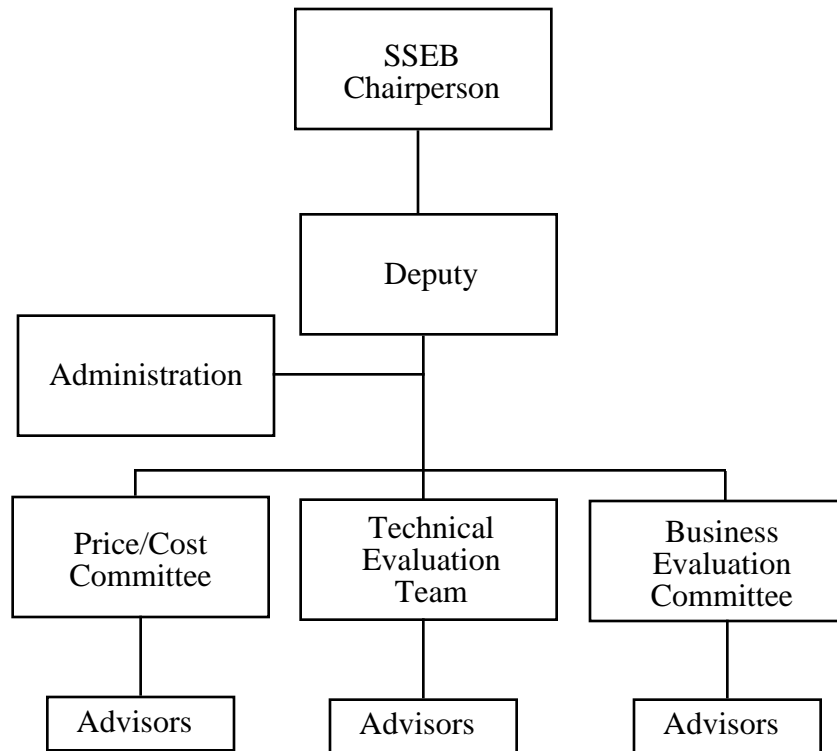
Unlike most acquisitions, the source selection for a FIP resource may also require you to interface with the Trail Boss. Briefly, the Trail Boss will be a senior individual who has executive level experience in both acquisition and FIP areas of expertise. Trail Bosses are often appointed for large, complex FIP resource acquisitions, such as modernization of information management systems. (See FIP Bulletin C-7 for details.)

(continued on next page)

38.1 Overview of Source Selection *(continued)*

Source Selection Evaluation Board Organization

The following figure shows a “typical” source selection evaluation board organization for a formal acquisition. Keep in mind that the actual organization for a given acquisition may vary but the basic organization will be very similar to this one.



38.2 Source Selection Methodologies

Two Basic Approaches to Source Selection

As in other acquisitions, there are two basic approaches to source selection in a FIP resources acquisition. These are:

1. **Lowest Price - Technically Acceptable Proposal** - under this approach, all the evaluation factors, except price, are, in effect, evaluated on an “Go, No-Go” basis. This approach is appropriate for a FIP resources source selection when price is properly the deciding factor, once the technical acceptability of offers has been determined. “Go, No-Go” factors define a standard of comparison for FIP contract requirements which proposals either satisfy completely (“Go”) or fail to meet (“No-Go”).

For example, suppose you require a major FIP resource system integration. If you require offerors to have completed three major FIP systems integration projects (experience) as one of the evaluation factors, those who do NOT satisfy this standard are not technically acceptable and receive a “No-Go.” The remaining offerors are then evaluated on lowest price.

2. **“Best Value” Concept** - is an approach that is increasingly used in FIP resources acquisitions. This approach considers the appropriate balance of technical merit, management capability and cost factors for a specific requirement that will provide the “best value” to the Government. There may be a tradeoff of higher price for a better supply or service.

For example, you may be willing to pay a higher price for a FIP resources systems integration service because one offeror has consistently demonstrated superior past performance, even though that offeror’s price is higher than the competing offers.

Importance of the Technical Evaluation Factors

Of course, the technical evaluation factors that you choose are important in any acquisition. In a FIP resources Acquisition, the technical evaluation factors are essential. Although these factors will normally be written by technical experts in the agency or program office, you should review them to make sure they support the intent of the acquisition objectives.

(continued on next page)

38.2 Source Selection Methodologies *(continued)*

Identifying Appropriate Factors

In any FIP resources source selection, a key task is the identification of appropriate factors for resources evaluation. Cost is *always* a factor, in source selection, but in a complex acquisition and in a “Best Value” acquisition, the technical evaluation factors take on more importance.

The technical evaluation factors are usually proposed by the requiring agency and listed in the Acquisition Plan. Before you include these in the Source Selection Plan, check to make sure that the proposed evaluation factors are in agreement with:

- FAR Parts 3 and 15;
- the SOW and specifications from the Acquisition Plan; and
- any special guidance from the SSA.

Consult Sample References

You might also consult references from various agencies to obtain information on which evaluation factors to use. The figure on the following page provides information on references from various agencies.

(continued on next page)

Sample References

GSA	Transportation	Commerce	DOD
<p>GSA Order ADM 2800.12D (Source Selection Procedures Handbook)</p> <p>Source Selection Procedures—Lessons Learned</p> <p>GSA Order, Committee management (ADM 5420.40D)</p> <p>Source Selection Evaluation Board Members</p> <p>Important Considerations for Source Selection of Federal Information Processing (FIP) Resources Using the Greatest Value Approach</p>	<p>Transportation Acquisition Regulation</p> <p>Transportation Acquisition Manual</p>	<p>Commerce Acquisition Manual (CAM)</p>	<p>DFARS DFARS 219.705-2</p> <p>AIR FORCE</p> <p>AFFARS Appendix AA AFFARS Appendix BB AFR 12-50 Table 70-1</p> <p>NAVY</p> <p>Navy Acquisition Procedures Supplement Subpart 5215.6</p> <p>SCCNAVINST Handbook 4200.33</p> <p>DLA</p> <p>Buying Best Value Through Source Selection</p>

38.2 Source Selection Methodologies *(continued)*

Predicting Appropriate Factors

Even if the evaluation factors have not been developed, it is possible, with some experience, to predict what the appropriate evaluation factors will be, and to predict which factors may be inappropriate.

An evaluation factor will be appropriate if it clearly measures compliance with one of the requirements and is related to the SOW and specifications.

For example, some computer systems, such as those in air traffic control, security, payroll preparation or other sensitive areas, must have very high availability rates (over 99.99%). Therefore, if one of the requirements is “High System Availability,” there must be an appropriate factor titled “High System Availability” and a standard to measure what is and is not high availability.

An appropriate standard for “High System Availability” might be “not less than 99.99% availability,” or “not more than one hour of malfunction, failure, or stoppage for each 1,000 hours of continuous operation.”

Inappropriate Factors

On the other hand, if the factor does not clearly measure compliance with a requirement, it may not be appropriate. For example, if an agency is very concerned about obtaining the best qualified contractor personnel for on a FIP services acquisition, it might specify “Corporate Experience,” or “Demonstrated Experience” as an evaluation factor. However, neither of these really measures personnel qualifications as clearly as “Key Personnel.” Therefore, it would not be appropriate to use corporate experience as a factor if you are more concerned about the individual technical qualifications of personnel.

CAUTION

Avoid using standards or evaluation factors which are too restrictive or “overspecify” the requirement. The use of evaluation factors or standards which are too restrictive may screen out potentially advantageous offerors.

Example - A very high availability rate (99.999%) may be appropriate for a computer used in air traffic control, but not for a computer used for ordinary desktop publishing.

(continued on next page)

38.2 Source Selection Methodologies *(continued)*

Relation to SOW and Specifications

A technical evaluation factor is appropriate if it is related to the SOW and the specifications. The SOW and the specifications are the starting point in determining if the technical evaluation factors are appropriate.

Check to see that there is a standard to measure each technical or business factor, each subfactor and each element. For example, if one factor is to be “Past Performance in the Integration of Systems,” you must have a standard for measuring past contractor performance. You might do this by requiring examples of all project summaries concerning integration of systems by the offeror over the most recent two year period but you must explain how you will evaluate the project summaries.

As the Contract Specialist, you must assure that standards have been developed for each factor and significant subfactor. The standard normally establishes the minimum acceptable level of compliance that must be offered for a factor, significant subfactor, or element to be considered acceptable. The standards are used to measure how well each offer meets, fails to meet, or exceeds, the requirements.

For example, if one factor is “Software Installation Plan,” then the standards must explain how the software installation plan will be evaluated, such as “compliance with agency installation milestones.”

The standards you establish for each FIP evaluation factor will be either “qualitative” or “quantitative.”

Quantitative vs. Qualitative Standards

A quantitative standard refers to terms of quantity or a measurement of quantity.

In a FIP resources acquisition, a quantitative standard might involve an acquisition of new hardware, such as a high speed printer. In this hypothetical case, you are concerned with whether the printer speed meets, fails to meet, or exceeds the required speed (performance standard).

The following language describes this standard applied to a hypothetical factor called “Operating Speed.”

“This standard is met when the printer will print 50 sheets per minute for a period of at least five (5) hours of continuous operation without shutdown or stoppage for cooling or other routine operator maintenance during an acceptance test.”

38.2 Source Selection Methodologies *(continued)*

Quantitative vs.
Qualitative
Standards
(continued)

A printer that meets the operating speed required (a performance standard) could be awarded a rating of “Satisfactory” in the technical evaluation. A printer that fails to meet this standard could be awarded a rating of “Unsatisfactory,” and a printer that *exceeded* the standard might even be awarded a rating of “exceptional” under the Multiple Distinctions of Merit Rule.

Qualitative
Standards

A qualitative standard in a FIP resource acquisition refers to the quality or kind. It does not relate specifically to quantity.

The following language describes a qualitative standard applied to a hypothetical factor called “compliance with quality control program.”

“This standard shall be met when the offeror provides evidence of a documented and functional Quality Control (QC) Program. The offeror’s QC program may be subject to a formal evaluation or random audit by this agency’s Office of Quality Assurance. This agency will use the ‘American National Standards Institute’s General Requirements for a Quality Control Program (Standard z1.8)’ to evaluate the offeror’s QC program.”

Questions To Ask

As you examine each evaluation factor, ask the following questions:

- Is this evaluation factor appropriate?
- Does this evaluation factor measure a requirement in the SOW or a specific performance or design specification?
- Is there a standard to explain how this requirement is met, not met, or exceeded?

If the answer to any one of these questions is “NO,” then the technical factor is probably not appropriate for the FIP acquisition and should be revised. Explain the specific shortcomings in the Summary Outline, for further discussion with the requiring agency technical personnel.

(continued on next page)

38.2 Source Selection Methodologies *(continued)*

Document Decisions and Rationale for Source Selection

Whatever evaluation factors you use in the source selection for a FIP resource, be sure to fully document all questions, decisions and rationale on the forms provided for that purpose, so that a clear “paper trail” is established in the event the Government later has to defend the selection against a protest. Unfortunately, protests against source selection for FIP resources acquisitions have become frequent in recent years. (Note - See Chapter 45, “Protest Issues.”)

GSA Assistance Programs

Finally, if you need help before beginning the source selection plan, you are again reminded to call on the various GSA assistance programs which are administered by the Office of Technical Assistance. These various programs offer nonmandatory, reimbursable assistance, available through the Information Technology Fund.

However, you must be aware that these sources of assistance focus primarily on the planning phase of a FIP resources acquisition. If you must use one of these sources of assistance, do so before completing your source selection plan. *Once you have received proposals and selected a source, it may be too late to make the best use of the assistance they could have provided earlier.*

38.3 Unique Considerations for a FIP Resources Source Selection

Introduction

This section discusses those considerations which are unique, or nearly unique, to the source selection process for a FIP resources requirement. Not all of these unique considerations will apply to every FIP resources acquisition, but a large or complex acquisition may require that you observe several or all of these considerations.

These unique considerations are shown in the following table.

UNIQUE CONSIDERATIONS FOR A FIP RESOURCE SOURCE SELECTION
<ul style="list-style-type: none"> • Acceptance Criteria • Testing Criteria (Capability and Performance Validation) • Effectiveness Level • Past Performance • Trade-Offs

Acceptance Criteria

FAR 46.101

The first consideration, almost unique to a FIP resource acquisition, is the need for stringent **acceptance criteria**. The acceptance criteria are those criteria which the FIP resource must attain in order to be considered acceptable to the Government. At a minimum, this means compliance with the design and performance specifications, and meeting all the *mandatory* requirements.

In the case of FIP resources, the acceptance criteria often demand that the hardware, software, or telecommunications equipment operate together in an integrated fashion, after installation at the Government facility under “real world” normal operating conditions for an extended period of time, such as thirty days, before Government acceptance and payment.

For example, the acceptance criteria may require that a newly installed air traffic computer system operate for a minimum of thirty consecutive days with an availability rate of 99.999 percent. During this acceptance period, the *contractor is usually obligated to document and repair any faults and malfunctions*.

38.3 Unique Considerations for a FIP Resources Source Selection

(continued)

Development of Acceptance Criteria

The acceptance criteria are developed by technical experts in the requiring activity or program office, and usually included in several key documents, with names such as the validation plan, or acceptance plan or test plan. These plans may later become part of the acquisition plan and your source selection plan. The acceptance criteria also are explained in the solicitation. The offeror may also be required to explain in its proposal how it will meet the acceptance criteria. Usually, the acceptance criteria are applied during an acceptance period, or acceptance test period, *beginning immediately after the installation of the hardware or software by the contractor.*

Essentially, the acceptance criteria explain the standards which must be met before the Government will accept the supplies or services, and unless the acceptance is successful, the Government may withhold some or all payment. As a contract specialist, *you should fully understand the acceptance criteria that you will require the contractor to meet.*

Exclude Nonmandatory Requirements

Remember, the acceptance criteria should demand compliance only with the mandatory requirements. The nonmandatory or “nice to have” features should NOT be incorporated into the acceptance criteria.

(Note - for a further discussion of acceptance, see Chapter 5, “*The System Life Cycle*,” and Chapter 12, “*Acquiring Software*.”)

Testing Criteria

A second consideration that is virtually unique to FIP resources source selection is the use of **testing criteria**. These are the test criteria that will be applied to test the FIP supplies or services at any time, not just during acceptance testing. The testing criteria explain what will be tested, when, for how long, under what conditions and to what standards.

The acquisition plan, the solicitation, and the contract should specify the conditions under which the FIP resources equipment or services will be tested. Depending on the nature of the acquisition, the technical personnel may decide to use one or more of the three types of testing criteria as shown in the table on the next page.

(continued on next page)

38.3 Unique Considerations for a FIP Resources Source Selection

(continued)

Types of Testing
Criteria

TYPES OF TESTING CRITERIA	
<ul style="list-style-type: none"> Contractor Certification - Normally reserved for compliance with design specifications, and for those specifications which cannot be tested without destruction or damage to equipment. The contractor certifies in writing that certain specifications have been met. <p>Examples: Compliance with manufacturing standards, hardness and durability of metal frames, plastic housings, conductivity of the electrical wiring, power consumption.</p>	
<ul style="list-style-type: none"> Factory Inspection Testing - Normally conducted at the contractor's facility, using contractor personnel and equipment to demonstrate compliance with performance specifications. Examples include demonstrations of components for new systems, and "benchmarking" of computers. 	
<ul style="list-style-type: none"> Acceptance Testing - Normally conducted at the Government's facility, following installation by the contractor's personnel and a "shake down" period to discover any "bugs" (for software), or any malfunctions in the operating hardware. The equipment or service is normally required to be demonstrated under realistic, normal working conditions, often with Government staff performing the operations and usually for an extended calendar period, such as 30 consecutive days. <p>Examples include sustained test of computers for sensitive matters such as requiring a 99.99% availability rate for air traffic control computers.</p>	

It is important that the testing criteria be appropriate for the purpose of the acquisition. In other words, the acceptance criteria influence the testing criteria for both capability and performance validation. In turn, the testing criteria also have a cost impact.

For example, compliance with design specifications and claims of capability, such as validity of the computer operator and maintenance manuals, can be obtained through *contractor certification*. The contractor can be required to deliver the manuals and to certify that they have been "validated" by testing.

(Topic continued on next page)

38.3 Unique Considerations for a FIP Resources Source Selection

(continued)

Testing Criteria (continued)

The manuals could then be examined by Government technical personnel without any need for visits to the contractor facility, or even without access to the equipment. Certification by the contractor is the cheapest method of testing, because there are minimum travel and labor costs for the Government.

On the other hand, if a critical aspect of the testing is a performance criterion, such as “Compatibility With Existing Equipment,” in an installed network for payroll or financial management, this can best be tested by a sustained performance test (30 or more days) at the Government’s facility. This type of testing is intended to discover any deficiencies or “bugs” that are not otherwise apparent.

The decision table on the following page shows how to determine what type of testing criteria may be appropriate in a given source selection.

Decision Table

Decision Table for Testing Criteria	
If...	Then...
<ul style="list-style-type: none"> The testing criteria concern design specifications which cannot be validated without damage or destructive testing... 	<ul style="list-style-type: none"> <i>Contractor certification</i> is probably the most appropriate.
<ul style="list-style-type: none"> The testing criteria involve a one time demonstration using contractor equipment and personnel... 	<ul style="list-style-type: none"> <i>on-site testing at the contractor’s facility</i> is probably the most appropriate.
<ul style="list-style-type: none"> The testing criteria require evidence of sustained, successful performance or high reliability under normal operating conditions... 	<ul style="list-style-type: none"> <i>Sustained performance and capability testing</i> after installation at the Government facility is probably the most appropriate.

38.3 Unique Considerations for a FIP Resources Source Selection

(continued)

Effectiveness Level

Another consideration somewhat unique to a FIP resource acquisition is the *effectiveness level*. Typically, the source selection for a FIP resources will include some quantitative and qualitative measurement of the effectiveness level. This can include measurement of FIP resources performance, such as speed, or capacity, reliability-availability-maintainability (RAM) or other such measures of overall effectiveness, which can be evaluated by technical experts.

As a part of the evaluation, the Government may award extra credit or weight to a FIP item which exceeds the desired minimum level of effectiveness. For example, if the Government specifies a requirement for a printer to print 1,000 pages per hour, a printer that does 2,000 pages per hour might be awarded extra credit.

Past Performance

Another consideration (not unique to a FIP resources source selection) is the emphasis on evaluation of *past performance* in the offeror's management plan. This is typically one of the major evaluation factors you will consider in a FIP resources source selection. In some cases, such as selecting a systems integrator, it may be the most important single evaluation factor, more important than either cost or technical approach.

Past Performance vs. High Risk

The reason that you should emphasize past performance is because there is sometimes a high risk that the Government will not achieve all acquisition objectives in a complex FIP resource acquisition. The technology can be quite complex, is advancing very rapidly, and may require difficult integration of products and services by different offerors (who may be in competition).

You can reduce (but not totally eliminate) some of the risk by making past performance one of the major evaluation factors in source selection, and requiring the offerors to submit evidence of successful past performance on identical or similar projects within the past several years, in the form of detailed project summaries. You can specify the format for these project summaries to obtain the type of information you need to determine past performance.

(continued on next page)

38.3 Unique Considerations for a FIP Resources Source Selection

(continued)

Example of RFP
Language for Past
Performance

The example below shows the type of language that you might insert into an RFP to alert the offerors to the relative importance or priority of “past performance” or “experience” in a FIP resource acquisition.

Priority Statement:

“The Government will make award to the responsible offeror(s) whose offer conforms to the solicitation and is most advantageous to the Government, cost or price and technical factors listed below considered. For this solicitation, technical quality is more important than cost or price. As proposals become more equal in their technical merit, the evaluated cost or price becomes more important.

The technical evaluation factors are listed below in descending order of importance:

- (1) Past Performance on similar contracts.*
- (2) Management Approach.*
- (3) Key Personnel.”*

Project Summaries
for Past
Performance

Usually, in a FIP resources acquisition, you will require the offerors to submit project summaries as evidence of successful project experience on the same or similar projects. Generally, experience on projects older than 3-5 years may be of very limited value, because the technology is advancing so rapidly, so you should usually limit your request for project summaries to the recent past.

Overemphasis on
Past Performance

However, you must be aware that too much emphasis on past performance can be unduly restrictive, possibly limiting the competition and shutting out innovation, especially by smaller or less experienced offerors. This is one of the factors to consider among the tradeoffs.

(continued on next page)

38.3 Unique Considerations for a FIP Resources Source Selection

(continued)

Tradeoffs

Finally, another nearly unique consideration in a FIP resources source selection is the requirement to establish and understand the available *tradeoffs*. It is sometimes impossible for the Government to obtain every one of the acquisition objectives in a given FIP resources acquisition, and it becomes essential in the source selection that you establish the tradeoffs that you are willing to make to attain the most important objectives.

Examples of Tradeoffs

For example, one offeror may have an impressive record of successful past performance, and lower life cycle costs for a computer system, while another offers greater expandability and performance, but at much higher price. Unless you have established and documented the tradeoffs, you will not be able to explain the possible tradeoffs, nor could you recommend the most advantageous source to the Source Selection Authority.

In order to establish the relationship among the tradeoffs, you must determine in advance which of the acquisition objectives (or which combination of objectives) are the most important, which are next most important, and so on down the list of acquisition objectives. In other words, you must rank order the FIP resources acquisition objectives and their relationships to each of the other objectives.

For example, if “risk avoidance” or “risk assessment” is the most important consideration, then you should check to see that a very high weight on past performance is assigned as one of the evaluation factors. If it isn’t, you should bring this to the attention of the evaluators so they can rewrite the technical factors. You should also understand how much in added cost or other technical factors you are willing to trade off in order to attain the objective of lower risk.

Or, if there are many qualified offerors and risk is not as important as “ease of use,” “lowest life cycle cost,” or other factors, then the evaluators should have assigned relatively lower weights to factors such as past performance and relatively higher weights to other factors which are more important to the higher ranked acquisition objectives. Whatever you determine are the most important acquisition objectives, you should *document the tradeoffs as part of your acquisition planning*, and include the tradeoffs in your source selection plan. During the course of a long or complex FIP resources acquisition, you should review these tradeoffs, because the emphasis may change, as a result of new technology or other factors, and you may wish to change your tradeoffs before negotiation.

38.4 The Source Selection Plan

Preparing the Source Selection Plan

As a contract specialist, you may have to prepare the Source Selection Plan. The Source Selection Plan can be a very detailed document, depending on the size and complexity of the FIP resources acquisition. In order to help you the following outline is provided.

SOURCE SELECTION PLAN OUTLINE

Source Selection of _____

1. Description of property or service to be acquired.
2. Description of organizational structure, including:
 - (a) The duties of the SSA
 - (b) The duties of the SSEB.
3. Proposed presolicitation activities.
4. A summary of the acquisition strategy.
5. A statement of the proposed evaluation factors including technical/business management and price or cost, and their relative importance.
6. A description of the evaluation process, methodology, and techniques to be used, including evaluation standards.
7. A schedule of significant milestones, such as:
 - Release of the RFP
 - Date Proposals due
 - Evaluation Starts
 - Evaluation Completed
 - Competitive range determination
 - Discussions
 - BAFOs
 - SSEB Briefs SSA on Findings and Evaluation
 - SSA Decision Due
 - Contract Review
 - Execution/Award
8. A conflict of interest form
9. Procurement Integrity Certificates
10. Non-disclosure forms
11. Provision for a secure meeting place.

(continued on next page)

38.4 The Source Selection Plan *(continued)*

Overview of
Source Selection
Plan Contents

Make sure that the SSP contains the following:

- A clear and concise description of the supply or service to be acquired. Remember that the description must be consistent with the acquisition plan; including the scope estimated contract dollar amount, and period of performance.
 - A description of the source selection evaluation and organization structure.
 - An organizational chart showing the relationships among the SSA, SSEB, contracting officer and any other key participants, their duties and responsibilities and names. You can also use a flow chart or matrix table for this purpose.
 - A summary of the acquisition strategy including the type of contract (i.e. FFP, CPFF, CPI, etc.) and any special features to be included in the contract. Also include a brief rationale as to why this acquisition strategy is recommended.
 - A statement of the evaluation factors and subfactors, their relative importance to one another, a description and standards for evaluation of each factor, and method of evaluation, i.e., by score, adjective rating, color coding, etc. (You develop this information when you create the evaluation criteria.)
 - A description of the evaluation process, methodology, and techniques to be used, (i.e., “best value” or “lowest acceptable price”), manner by which the evaluators will express judgments and the standard for assigning each judgment (numerically, adjectivally or some combination). If you conclude that you will require non-Government evaluators, provide full justification.
 - A milestone schedule.
-

(continued on next page)

38.4 The Source Selection Plan *(continued)*

Approval by SSA

Once the SSP is completed, it must be approved by the SSA. The urgency and complexity of the procurement, and the lead times involved, may require considerable work.

This may include one or more briefings on the work in progress of the SSP (prior to completion) for the SSA. In particular, you should notify the SSA if you are having difficulty developing the evaluation factors or obtaining access to technical experts, such as outside advisors.

Incorporating the Source Selection Plan in the RFP

It is important for certain key information from the source selection plan to be incorporated into sections L and M of the Request for Proposals (RFP). It is more important to remember that the evaluation conducted **MUST** be consistent with the evaluation information contained in the RFP in sections L and M. Therefore, the source selection plan and information incorporated into sections L and M **MUST** be consistent for evaluation purposes. The elements of the SSP which you **MUST** incorporate are:

- A clear, concise description of the supply or services required by the Government.
- The type of contract (FFP, CPFF, CPI, T&M or other).
- The evaluation process, including an explanation of either the "greatest value" or "lowest cost" approach.
- Evaluation factors and subfactors. This includes both qualitative and quantitative factors, usually explained in descending order of importance.
- Pricing information (unless there is no cost to the Government).
- Instructions to the offeror on preparing, formatting, packaging and submission.

Incorporate into Section L

You **MUST** explain in Section L of the RFP:

- the methods by which the offerors will submit their proposals
- the requirements to specifically address those areas that you will evaluate and score or rate during source selection

38.4 The Source Selection Plan *(continued)*

Incorporate into
Section M

You **MUST** explain in Section M of the RFP the relative importance of the evaluation factors and significant subfactors, including:

- price or cost.
- technical (including business and management).

In Section M, you are **NOT** required to disclose the actual weights that will be used for ranking the factors, but you **MUST** use language that will properly inform offerors of the evaluation factors and significant subfactors for the award and the way the source selection will be made. Remember disclosing any weights is **NOT** prohibited; however, it is **NOT** recommended. If you want good proposals you should give the offerors some indication of which factors are more important than others so they can propose accordingly. Our objective is to get a quality commodity or service for the Government, **NOT** to make the offerors have to guess at what we want. Therefore, your evaluation criteria must be clearly presented in Section M.

SUMMARY

In this chapter, you learned to predict the appropriate technical factors for inclusion into the RFP (sections C, L, M). The next chapter covers technical evaluation for a FIP resources acquisition.

CHAPTER 39

DEVELOPMENT OF A SOLICITATION FOR FIP RESOURCES

Chapter Vignette

“What about the actual development of the solicitation for a FIP resources acquisition?” asked Mark. “Is that process different in any way for a FIP resources acquisition?”

“Well,” Marcia replied, “there are certainly many similarities, but there are some different areas of emphasis that you should remember. You will recall that FIP resources acquisition is governed by a different set of regulations and can have different sources of funding. You also learned that licensing rights can be critical, especially for software. These are all factors to keep in mind as you develop a solicitation. Recently, many of the Government’s FIP resources acquisitions have ended in protest actions, sometimes because of oversights in the preparation of the solicitation. So you must be careful to develop the solicitation to make the evaluation and the rest of the acquisition as smooth as possible.”

Course Learning Objectives

At the end of this chapter, you will be able to:

Overall:

Construct and analyze a solicitation which incorporates all required clauses and provisions for a FIP resources acquisition.

Individual:

- 39.1 Generalize the differences between a FIP resources solicitation and other commodity solicitations.
- 39.2 Itemize and apply the unique areas to be covered in a FIP resources solicitation.
- 39.3 Explain how to determine whether or not to require offerors to also submit financing plans for selected financing strategy.
- 39.4 Apply the Standard Solicitation Document to generate a FIP resources solicitation.

Chapter Overview

Scope

This chapter explains how to construct and analyze a solicitation which incorporates all required clauses and provisions for a FIP resources acquisition. It discusses the differences in preparing a solicitation for FIP resources, including some unique areas, compared with a solicitation for other commodities. It also discusses how to determine whether to require offerors to submit financing plans with their proposals, and how to use the Standard Solicitation Documents to develop a solicitation.

As a contract specialist, you may often be responsible for developing or assembling a solicitation for FIP resources. You will find that there are many similarities, but some differences, in the development of the solicitation.

Topics in This Chapter

This chapter includes the following topics:

SECTION	TITLE	PAGE
39.1	Differences in Developing a FIP Resources Acquisition Solicitation	39-5
39.2	Unique Areas Covered in a FIP Resources Acquisition	39-16
39.3	Requiring Offerors to Submit Financing Plans	39-18
39.4	Applying Standard Solicitation Documents to a FIP Resources Solicitation	39-19
39.5	Solicitation Checklist for FIP Resources	39-20

(continued on next page)

Chapter Overview *(continued)*

References

In order to perform the tasks discussed in this chapter, you would normally have access to the following documents and references during development of a solicitation:

- The GSA Guides for FIP Resources Acquisition
 - The FAR, especially 7.304, 10, 12, 15.406-2(a), 15.406-2(c), 15.406-2(d), 15.406-2(e), 15.406-2(f), 15.406-2(h), 15.406-3, 15.406-5(a), 15.406-5(b), 37.205(b), 46, 52.202-1, 52.203-1, 52.203-2, 52.203-3, 52.203-4, 52.203-5, 52.203-9, 52.203-11, 52.204-3, 52.207-4, 52.209-5, 52.210-3, 52.215-9, 52.215-11, 52.215-19, 52.215-20, 52.232-5, 52.222-42, 52.216-1, 52.216-22, 52.217-9, 52.219-1, 52.219-3, 52.220-1, 52.222-19, 52.222-21, 52.222-22, 52.222-25, 52.222-26, 52.222-28, 52.223-1, 52.223-5, 52.225-1, 52.225-8, 52.225-9, 52.225-12, 52.227-6, 52.227-15, 52.230-1, 52.232-25, 52.232-28, 52.252-1, 52.252-2, 53.301-33, 53.301-1447,
 - The FIRMR, especially 201-39.1701-8(c), 201-39.5202-6
 - The DFARS, especially 237.205-71, 212, 246, 252.219-7005, 252.225-7000, 252.225-7001, 252.227-7028, 252.270-7002, 252.270-7006 and 352
 - Federal Information Processing Standards
 - Standard Solicitation Document (SSD)
-

39.1 Differences in Developing a FIP Resources Acquisition Solicitation

Background	<p>This section discusses the differences in developing a solicitation for a FIP resources acquisition compared to the solicitations that you will prepare for most other commodities. At this point, you should already be familiar with the process for developing solicitations, including the various clauses and sections of the solicitation.</p> <p>This section briefly reviews the process which is part of developing the solicitation, with <i>emphasis on the responsibilities of the contract specialist</i> to ensure the solicitation is complete and includes all the necessary information.</p>
Goals of the Solicitation	<p>A well-developed solicitation accomplishes several goals:</p> <ol style="list-style-type: none"> 1. It announces the rules for competition in the acquisition, including stating the time and place for receipt of proposals and the information to be provided by the offerors; 2. It announces the specifications for the product or services; and 3. It explains the terms and conditions, including the responsibilities of both the Government and the contractor, including the description of the tasks to be done at a specific price and time of delivery.
Definitions	<p>For the purposes of this chapter, <i>a solicitation is any method of soliciting offers from prospective vendors to provide goods or services</i>. A solicitation may be an Invitation for Bid (IFB) or a Request for Proposal (RFP). The emphasis in this chapter is on the RFP. A RFP is a method of soliciting offers where the Government requests offers and both the technical and cost proposals may be negotiated.</p> <p>At present, nearly all solicitations are paper documents. However, you should be aware that the use of electronic commerce (EC) and electronic data interchange (EDI) is growing rapidly. A growing percentage of solicitation development will be electronic and automated, especially for simplified acquisition procedures. Although EC and EDI are beyond the scope of this text/reference, you should be aware that they may soon change the way you prepare and exchange acquisition documents with vendors.</p>

(continued on next page)

39.1 Differences in Developing a FIP Resources Acquisition Solicitation *(continued)*

Solicitation Format Of course, the format that you will use to develop a solicitation for FIP resources is essentially the same as a solicitation for any other commodity, but some of the specific contents may differ. You will still be responsible to develop or assemble the sections shown in the following table. Note that the RFP format parallels the Uniform Contract Format (UCF).

SECTIONS OF THE SOLICITATION DOCUMENT	
<i>PART I - THE SCHEDULE</i>	
<ul style="list-style-type: none"> • SECTION A - SOLICITATION/CONTRACT FORM • SECTION B - SUPPLIES OR SERVICES AND PRICES AND COSTS • SECTION C -DESCRIPTION/SPECIFICATIONS/WORK STATEMENT • SECTION D - PACKAGING AND MARKING • SECTION E - INSPECTION AND ACCEPTANCE • SECTION F - DELIVERIES OR PERFORMANCE • SECTION G - CONTRACT ADMINISTRATION DATA • SECTION H - SPECIAL CONTRACT REQUIREMENTS 	
<i>PART II - CONTRACT CLAUSES</i>	
<ul style="list-style-type: none"> • SECTION I - CONTRACT CLAUSES 	
<i>PART III- LIST OF DOCUMENTS, EXHIBITS AND OTHER ATTACHMENTS</i>	
<ul style="list-style-type: none"> • SECTION J - LIST OF ATTACHMENTS 	
<i>PART IV- REPRESENTATIONS AND INSTRUCTIONS</i>	
<ul style="list-style-type: none"> • SECTION K - REPRESENTATIONS, CERTIFICATIONS, AND OTHER STATEMENTS OF OFFERORS, OR QUOTAS • SECTION L - INSTRUCTIONS, CONDITIONS, AND NOTICES TO OFFERORS OR QUOTAS • SECTION M - EVALUATION FACTORS FOR AWARD 	

(continued on next page)

39.1 Differences in Developing a FIP Resources Acquisition Solicitation *(continued)*

Use of Automated Programs for Preparing Solicitations

In recent years, several commercial firms have marketed computer software designed to simplify and speed up the process of developing a solicitation. These computer programs can automatically format the solicitation, eliminating much of the typing, so you can concentrate on selecting the appropriate content. A major feature of these programs is the ability to select and “paste in” common or frequently-used clauses, so-called “boilerplate,” in the solicitation. This can be an important time saver in the preparation of a complex solicitation with many clauses that you wish to incorporate by reference.

Although the Federal Government does not specifically endorse any one brand name of software for this purpose, the use of such software is spreading throughout many agencies and you should determine whether your agency uses such software. However, you may already know how to use the Automated Procurement Document System (APDS), or the Standard Solicitation Documents (SSDs) discussed in Section 39.4 of this text/reference. These are available for use throughout the Federal Government.

Using the FAR Matrix to Identify Provisions and Contract Clauses

As you proceed to develop each section of the solicitation, you must be aware of the requirement to incorporate and tailor any clauses, as required, to explain the requirement to the offerors. *You should check the matrix in FAR Part 52. It will help you to identify those provisions and clauses which are either required, required when applicable, or optional for inclusion*, by type of contract.

For example, the matrix will show you that if you are considering a clause on liquidated damages for a fixed price FIP services contract, it is optional to incorporate by reference the provisions of the clause according to FAR 12.204(a). Also check FAR Part 52 and DFARS Part 252 for instructions and information on using specific provisions and contract clauses.

(continued on next page)

39.1 Differences in Developing a FIP Resources Acquisition Solicitation *(continued)*

Differences in
Section A

FAR 53.301-33 FAR 53.301-1447 FAR 15.406-2(a)

The purpose of Section A, Solicitation Contract Form, is to announce the solicitation (or an amendment to an earlier solicitation), and offerors' bids and acceptance of a solicitation. Section A of the RFP is printed on Standard Form 33. *There are no major differences in preparing Section A for a FIP resources solicitation, or for any other type of commodity.*

Differences in
Section B

FAR 15.406-2(b)

The purpose of Section B, Supplies or Services and Prices/Costs, is to provide a summary of all supplies and/or services to be acquired, and the quantities. Section B contains tables to be completed by the offerors. The tables can be structured differently, depending on the requirements and how the Government expects to evaluate the Cost Proposals. For example, if you require FIP maintenance in different increments, you can specify a Contract Line Item Number (CLIN) for maintenance (per call), maintenance (per hour), maintenance (per week), maintenance (per year), depending on the agency's requirements. *There are no other major differences in preparing Section B for a FIP resources solicitation.*

(continued on next page)

39.1 Differences in Developing a FIP Resources Acquisition Solicitation *(continued)*

Differences in Section C

FAR 10 FAR 15.406-2(c) FAR 7.304 FAR 37.205(b) DFARS 237.205-71

The purpose of Section C, Description/Specification/Work Statement, is to specify all mandatory requirements, evaluated optional features, and subjective technical factors required. You may specify requirements for FIP hardware, software, maintenance, telecommunications and/or FIP services or support services. You may state the requirements in functional terms, performance terms, or as “brand name or equal” or “specific make & model,” if justified. You may also use any combination of these specifications in one solicitation.

In Section C for a FIP resources acquisition, there are some important differences and areas of emphasis. You will obtain the requirements for this section from the technical staff members. For example, here you might mention those requirements that are essentially unique to a FIP resources acquisition, such as:

- hardware requirements
- software requirements
- telecommunications requirements
- system management and security requirements
- system expandability requirements
- data handling requirements
- system reliability and availability requirements
- technology substitution or technology insertion
- software conversion
- maintenance

Differences in Section D

FAR 10.004(e) FAR 15.406-2(d)

The purpose of Section D, Packaging and Marking, is to provide specific guidance to offerors on how to package, mark and preserve the supplies provided to the Government. Normally, the standard types of packaging and marking used by commercial companies are sufficient and acceptable for the Government delivery of FIP resources, such as hardware. *Unless there are some special requirements for packaging, there are no major differences in preparing Section D.*

(continued on next page)

39.1 Differences in Developing a FIP Resources Acquisition Solicitation *(continued)*

Differences in
Section E

FAR 15.406-2(e) FAR 46 DFARS 246
--

The purpose of Section E, Inspection and Acceptance, is to provide specific guidance on the inspection, acceptance, quality assurance and reliability requirements of the acquisition. It defines the responsibilities of both the Government and the contractor. *This is another section where there may be several major differences .*

For example, in this section you might have to explain in detail the requirements for acceptance testing for hardware, software or an integrated system. If the requirement was for “compatibility-limited” hardware or software, this section might contain a description of how the compatibility-limited items would be tested. For very complex systems, there may even be a detailed acceptance plan that would be referenced in this section, including a requirement for the contractor to correct any discrepancies noted during acceptance testing.

Differences in
Section F

FAR 12 FAR 15.406-2(f) DFARS 212
--

The purpose of Section F, Deliveries or Performance, is to provide information on the delivery or performance. Typically, for a FIP resources acquisition, this section might include information such as:

- term of the contract
- technology substitution
- major field modifications
- relocation of equipment
- transportation of equipment
- delivery requirements
- place of performance
- paid holidays
- time of delivery

This is another section where there may be some major differences.

For example, in this section you might have to explain in detail the requirements for technology substitution and liquidated damages for maintenance. These requirements are common to FIP resources acquisitions.

(continued on next page)

39.1 Differences in Developing a FIP Resources Acquisition Solicitation *(continued)*

Differences in Section G

FAR 15.406(g)

The purpose of Section G, Contract Administration Data, is to provide instructions on how the contract will be administered. Section G announces the Contracting Officer and the Contracting Officer's Technical Representative's names, addresses and responsibilities, along with contract administration information, payment information (such as due date), interest on overdue payments, and method of payment.

There are no major differences between this section in a FIP resources solicitation and in the solicitation for other commodities.

Differences Section H

FAR 15.406-2(h)

The purpose of Section H, Special Contract Requirements, is to clearly state the special clauses which are required, but which may not have been included in Section I. For example, you might include the following special provisions in Section H:

- Price guarantees;
- Ordering (e.g., when or how supplies or services are to be furnished;
- Options (e.g., increased quantity requirements);
- Terms of the contract;
- Maintenance credits;
- Insurance;
- Alterations and attachments to equipment;
- Contractor-furnished software (i.e., additional information or instructions pertaining to Section C);
- Warranty exclusion and limitation of damages;
- Commitments and warranties;
- Government-provided support;
- New releases;

(Topic continued on next page)

39.1 Differences in Developing a FIP Resources Acquisition Solicitation *(continued)*

Differences
Section H
(continued)

- New material requirement;
- Substitutions and additions;
- Rights in technical data and computer software;
- Liquidated damages for hardware and software;
- Maintenance;
- Guarantee of purchased equipment
- Effective date of maintenance;
- Relocation of leased software and hardware;
- Replacement of leased equipment;
- Training (e.g., support and administration).

As you can see from this list of provisions, Section H for a FIP resources solicitation can differ significantly from the same section in a solicitation for other commodities.

Differences in
Section I

FAR 15.406-3 FAR Part 52 DFARS Part 252

The purpose of Section I, Contract Clauses, is to identify the clauses required by the FAR that are not included in any other sections. These may include any of the following:

- Definitions (FAR 52.202-1);
- Officials not to benefit (FAR 52.203-1);
- Gratuities (FAR 52.203-3);
- Covenant against contingent fee (FAR 52.203-5);
- Indefinite quantity (FAR 52.216-22);
- Equal opportunity (FAR 52.222-26);
- Clearance of subcontract (FAR 52.222-28);
- Prompt payment (FAR 52.232-25).

Section I for a FIP resources solicitation is not substantially different from the same section for any other commodity.

(continued on next page)

39.1 Differences in Developing a FIP Resources Acquisition Solicitation *(continued)*

Differences in Section J

FAR 15.406-4,
Part III

The purpose of Section J, List of Attachments, is provide to the offerors the attachments necessary to prepare a proposal. For example, if any documents are referenced in the solicitation, you should attach them to the solicitation, or provide them for reference at an announced location. In this section, you should include:

- a list of acronyms; and
- a listing of the applicable standards from the *Federal ADP and Telecommunications Standards Index*
- Site locations
- CDRLS/DIDS

For each reference, you should state the title, date, and number of pages, in accordance with FAR 15.406.

Since this section must contain the specific references that apply to the particular solicitation, *this section in a FIP resources solicitation can differ greatly from the solicitation for other commodities.*

Differences in Section K

FAR 15.406-5(a)

The purpose of Section K, Representation, Certifications, and Other Statements of Offerors or Quoters, is to identify any provisions of the solicitation that require representations, certifications, or the submission of additional information by the offerors. For example, in this section, you might include:

- Preference for labor surplus area concerns (FAR 52.220-1);
- Walsh-Healey Public Contracts Act Representation (FAR 52.222-19);
- Certification for Nonsegregated Facilities (FAR 52.222-21);
- Previous Contracts and Compliance Reports (FAR 52.222-22);
- Affirmative Action Compliance (FAR 52.222-25)
- Clean Air and Water Certification (FAR 52.223-1);
- Certification Regarding a Drug-Free Work Place (FAR 52.223-5);
- Buy American Certificate (FAR 52.225-1)

(Topic continued on next page)

39.1 Differences in Developing a FIP Resources Acquisition Solicitation *(continued)*

Differences in
Section K
(continued)

The development of Section K for a FIP resources solicitation is not generally different than that for any other commodity. However, in this section, you must be sure to explain factors such as royalty information (FAR 52.227-6); representation of limited rights data and restricted computer software (FAR 52.227-15); and requirements for technical data certification (DFARS 252.227-7028) if they apply to the acquisition.

Differences in
Section L

FAR 15.406-5(b)

The purpose of Section L, Instructions, Conditions, and Notice To Offerors or Quotes, is to provide to the offerors guidance on preparing and submitting the proposal, such as:

- Point of Contact - Contracting officer
- Number of volumes;
- Page limitations;
- Specific formats (such as 12 point Times Roman, double spaced);
- Outline of the technical proposals;
- Type and size of paper;
- Type of binding;
- Electronic format if necessary.

Note that in a complex FIPS resources acquisition, there may be as many as five different volumes required from the offerors:

- Volume I - Technical Proposal;
- Volume II - Business and Management Proposal;
- Volume III - Cost Proposal;
- Volume IV - Small Business and Small Disadvantaged Business and Women-owned Business Subcontracting Plan;
- Volume V - Reference Documents

Any Live Test Demonstrations (LTDs) should be required in this section.

The development of Section L for a FIP resources solicitation is not essentially different than in a solicitation for other commodities.

(continued on next page)

39.1 Differences in Developing a FIP Resources Acquisition Solicitation *(continued)*

Differences in
Section M

FAR 15.406-5(c)

The purpose of Section M, Evaluation Factors for Award, is to provide to the offerors the information on how the Government intends to evaluate the proposals and select the most advantageous offer. This section should include the evaluation factors, subfactors, method of evaluation, relative weights assigned, and other evaluation criteria.

The development of Section M for a FIPS resources solicitation is essentially the same as for any other commodity.

Reminder:

It is imperative that you list and explain evaluation factors carefully. There have been major problems in FIP acquisitions due to the lack of clear explanation of evaluation factors. This in turn results in elongated procurement leadtime, vendor confusion with regard to how proposals will be evaluated and possible Government loss of protests due to ambiguities in the RFP. In addition, lack of clear delineation of evaluation factors will lead to a disjointed and ineffective evaluation process.

39.2 Unique Areas Covered in a FIP Resources Acquisition

Unique Areas

As you have seen, there are many similarities in developing a FIP resources solicitation and a solicitation for any other commodity. However, as shown in the previous section, there are substantial differences in some sections. The following table summarizes the sections and areas that are unique, or nearly unique, to the FIP resources solicitation, and the areas you should especially note in the development of the solicitation.

Section B - Supplies or Services and Prices/Costs	Note especially the maintenance requirements that should be specified
Section C - Description/Specification/Work Statement	Note the specific requirements for hardware, software, telecommunications, data handling and other requirements that are unique to FIP resources acquisitions
Section E - Inspection and Acceptance	Note especially the requirements for acceptance testing for hardware, software and/or an integrated system (usually in accordance with a test plan or acceptance plan)
Section F - Deliveries or Performance	Note especially those areas that are nearly unique to FIP resources, such as technology substitution, major field modifications, and liquidated damages
Section H - Special Contract Requirements	Note especially those areas which are nearly unique to FIP resources, such as maintenance credits, contractor-furnished software, warranty exclusion and limitation of damages, rights in technical data and computer software, liquidated damages for hardware and software, maintenance relocation of leased hardware and software and training.
Section J - List of Attachments	Note especially to include a list of acronyms, applicable standards, site locations, and CDRLS/DIDS
Section K - Representations, Certifications, and Other Statements of Offerors or Quoters	Note especially the requirements for royalty information, representation of limited rights data and restricted computer software

For each of these sections, you should be particularly careful to select any necessary clauses, descriptions or explanations that will explain fully the Government's requirements.

(continued on next page)

39.2 Unique Areas Covered in a FIP Resources Acquisition *(continued)*

Examples of Unique Clauses

The following are examples of FIRMR references for instructions on using provisions and clauses unique to FIP resources acquisitions in solicitations and contracts.

- 201-39.5202-1 FIRMR Applicability
 - 201-39.5202-2 Availability of the “Federal ADP and Telecommunications Standards Index.”
 - 201-39.5202-3 Procurement Authority
 - 201-39.5202-4 Evaluation of Options—FIP Resources
 - 201-39.5202-5 Privacy or Security Safeguards
 - 201-39.5202-6 Warranty Exclusion and Limitation of Damage
-

39.3 Requiring Offerors to Submit Financing Plans

Financing Plans

This section discusses whether to require financing plans from offerors in a FIP resources proposal. You will find that in some cases, it may be necessary in the solicitation to require offerors to submit financing plans with their proposals. This can happen in those large scale acquisitions where there may be a requirement for the contractor to spend a large amount of money before any Government payment, notwithstanding the Prompt Payment Act.

As part of the overall acquisition strategy, you must determine how the acquisition will be financed. The financing strategy will depend on the many price-related factors, the size of the acquisition and the overall anticipated costs. In many cases, the development costs may be moderate and most, or many, of the system components will be commercial off-the-shelf items, for which the costs and rate of spending can be well established. On the other hand, in some FIP resources acquisitions, there may be considerable costs, such as research and development costs. In such acquisitions, a prime contractor may have to expend millions of dollars to complete feasibility studies, preliminary or advanced studies, design the system and subsystems, and begin construction or installation.

In such cases, there can be a risk to the Government's acquisition goals if the contractor does not have sufficient financial resources to begin and continue work. Of course, some projects can be so expensive that it is not reasonable to expect that a contractor will be able to complete the work without borrowing money, while awaiting Government payments. Therefore, in order to minimize the risk of interruptions caused by lack of funding, *you may require the offerors to submit a financing plan as part of the business and management plan*, to indicate that they are responsible offerors with the financial resources required to maintain a sustained effort.

Typically, the financing plan will be submitted as part of the business and management plan and will explain the anticipated level of expenditures and the sources of funding the offeror expects to use, such as commercial loans from banks. It may also include letters signed by officers of banks, such as bank presidents or chief loan officers, attesting to their willingness to loan necessary funds to the offeror specifically for the project.

39.4 Applying Standard Solicitation Documents to a FIP Resources Solicitation

Standard
Solicitation
Documents

This section discusses the application of the Standard Solicitation Documents (SSDs) in the development of a FIP resources solicitation. The SSDs are a series of sample documents published by GSA that have proven useful in the development of solicitations for FIP resources. The SSDs are intended to facilitate the development of FIP resources solicitations and provide some uniformity in competitive acquisitions. They contain sample language that you may find useful in developing a solicitation, whether for hardware, software, services, support services, or telecommunications. If you are required to develop a FIP resources solicitation, it is recommended that you check the SSDs to determine if the documents therein can be applied to your solicitation.

SSDs are periodically updated and are currently available on a series of high density (HD) computer diskettes formatted for WordPerfect and are available on CD-ROM from the "Government Printing Office."

If you wish to obtain further information on the use of SSDs, contact:

General Services Administration (KMR)
Room 3224
18th and F Streets, NW
Washington, DC 20405

You can also call (Commercial or FTS) (202) 501-3194.

39.5 Solicitation Checklist for FIP Resources

The following is a checklist for use in preparation of FIP resource solicitations. It is NOT all-inclusive, but contains the major topics that should be addressed.

	Have the required and applicable studies, analyses, and justifications been completed? Check the following.
_____	Determination of need and requirements analysis (FIRM Part 201-20)
_____	Analysis of Alternatives
_____	Documentation to support value placed on evaluated optional features and on other technical and contractual evaluation factors to be used
_____	Justifications for compatibility limited requirements (FIRM 201-20.103-4)
_____	Justifications for specific make and model or procurements involving other than full and open competition (FIRM 201-20.103-5)
_____	Software conversion studies (FIRM 201-21.5, 201-20.203-4, and FIRM Bulletin C-14)
_____	Have the Privacy Act requirements in FIRM 201-21.3 been met?
_____	Have the requirements for sharing in FIRM 201-21.4 and the reutilization program in FIRM Part 201-23 been met?
_____	Can established commercial sources be used?
_____	Is there a clear and unambiguous description of the supplies or services to be procured?
_____	Have specifications been developed according to governing policy guidance? (Where to find current governing policy)
_____	Have computer security requirements been incorporated into the specifications?
_____	If there are unusual or limiting features in the solicitation document, are they clearly stated?
_____	Are all applicable standards specified (FIPS, FED-STD, etc.)?
_____	Are inspection and acceptance criteria included?
_____	Has an industry review of the specifications been made?
_____	Has the system/item life been determined?
_____	Are the requirements for a benchmark demonstration, or operational capability demonstration, clear? Are they adequate to demonstrate the required capability?
_____	Can the required FIP resources be realistically obtained by procurement contract within the time frame specified?
_____	Does the technical data required correlate with the evaluation criteria?
_____	Will the contractor require access to a department facility and/or require use of government-furnished property, materials, or services?
_____	Are evaluation factors for selection and award clear?
_____	Are the special provisions or clauses recommended by the FIP manager/initiator of the requirement to be placed in the solicitation and/or contract, pertinent and reasonable?
_____	Must a specific acquisition delegation of procurement authority be obtained from GSA?
_____	Does the procurement file contain required determinations, findings, and other statements of the contracting officer (e.g., Justification of Other than Full and Open Competition, etc.)?

SUMMARY

In this chapter, you learned that, although there are many similarities, the development of a FIP resources solicitation can differ in certain sections from the development of a solicitation for other types of commodities. The next chapter will discuss the actions you should take in processing the proposals for a FIP resources acquisition.

CHAPTER 40

PROCESSING PROPOSALS FOR FIP RESOURCES

Chapter Vignette

Mark was wondering if there was any difference in the way that proposals for FIP resources acquisitions are to be handled and processed.

“Once again,” explained Marcia, “there are many similarities and the overall process is the same, but in an acquisition as complex as most FIP resources acquisitions are, you really have to be careful about the potential areas for discussion, the inconsistencies with the RFP’s terms and conditions, effectiveness levels, current production, and special programs.”

“Of course,” she continued, “you have to sanitize the technical and cost proposals and safeguard them.”

Course Learning Objectives

At the end of this chapter, you will be able to:

Overall:

Distinguish potential areas for discussion and determine any inconsistencies in the proposal with the RFP's terms and conditions.

Individual:

- 40.1 Summarize potential areas for discussion and distinguish “minor irregularities and informalities” from differences requiring discussion.
- 40.2 Explain how to review proposals submitted and identify commercial terms and conditions in offers that are inconsistent with the RFP's terms and conditions.
- 40.3 Identify the need to sanitize technical and cost proposals.
- 40.4 Identify the need for safeguarding of proposals.

Chapter Overview

Scope

This chapter explains how to distinguish potential areas for discussion and how to determine any inconsistencies in the proposal with the RFP's terms and conditions.

It discusses how to review submitted proposals and how to identify commercial terms and conditions in offers that are inconsistent with the RFP's terms and conditions (including data rights, warranties, effectiveness level, current production, and special programs).

This chapter also identifies the need to sanitize technical and cost proposals and the need for safeguarding of proposals.

Topics in This Chapter

This chapter includes the following topics:

SECTION	TITLE	PAGE
40.1	Distinguishing Potential Areas for Discussion	40-4
40.2	Reviewing Proposals for Commercial Terms and Conditions	40-7
40.3	The Need to Sanitize Technical and Cost Proposals	40-10
40.4	Safeguarding of Proposals	40-12

References

You will need the following key references and documents to perform the actions discussed in this chapter:

FAR	15.406-5(b)	52.215-7
	15.413	52.215-12
	15.601	52.246-19
	27.401	

40.1 Distinguishing Potential Areas for Discussion

Distinguishing Potential Areas for Discussion

This section discusses how you should distinguish potential areas for discussion with offerors and how you can distinguish “minor irregularities and informalities” from differences which require discussion. When proposals are received, you may be required to review them to identify the proposals which are:

- clearly not responsive, or not within the competitive range, such as those which ignored a requirement for a small business set aside; or
 - responsive, but contain minor irregularities, such as typographical errors requiring clarification, or
 - responsive but contain possible deficiencies requiring possible discussion.
-

What Are Minor Irregularities?

As you review proposals, you may come across several minor irregularities. An irregularity is an apparent or obvious clerical mistake or informality in a proposal. An obviously incorrect address, or a mistake in adding labor hours may be an irregularity. If you discover an irregularity in a proposal, you are allowed to contact the offeror for a “clarification” of that irregularity. For example, you can ask for the correct address, or the correct date or correct sum of labor hours.

FAR 15.601

FAR 15.601 states that clarification means communication with an offeror for the sole purpose of eliminating irregularities, informalities, or apparent clerical mistakes in the proposal.

Be careful here. It is acceptable to let the offeror correct minor irregularities, but not deficiencies. A deficiency is any part of a proposal that fails to satisfy the Government’s requirements. (FAR 15.601).

For example, you can use clarification to let an offeror correct a minor arithmetic error but you cannot use clarification to allow an offeror to lower the price in the cost proposal, or make a major change to the technical proposal. If you are trying to correct more than a minor irregularity, you are conducting a “discussion,” rather than a clarification.

(continued on next page)

40.1 Distinguishing Potential Areas for Discussion *(continued)*

What Is a
Discussion?

You may recall that a discussion means any oral and/or written communication between the Government and an offeror (other than communications conducted for the purpose of clarifications), whether or not initiated by the Government that

- (a) involves information essential for determining the acceptability of a proposal, or
- (b) provides the offeror an opportunity to revise or modify its proposal (FAR 15.601).

FAR 15.601

Discussions with
All Offerors

Also, if you open discussions with one offeror who is within the competitive range, you must then hold discussions with all offerors within the competitive range. You can see that it does not pay to open discussions carelessly.

(continued on next page)

40.1 Distinguishing Potential Areas for Discussion *(continued)*

Examples of Minor Irregularities and Deficiencies

Sometimes it may not seem easy to tell the difference between an irregularity and a deficiency. However, you can sometimes tell an irregularity by comparing a statement or number in one part of a proposal to other parts of the same proposal. Consider the following examples.

Example 1 - An offeror incorrectly adds estimated labor hours for FIP maintenance in the technical proposal during the first year of a three year effort. Instead of adding 20 hours per quarter to total 80 hours, the offeror's total is only eight (8) hours. However, the cost proposal correctly shows a price for 80 hours. In this case, there is an obvious irregularity that you can correct through clarification.

Example 2 - An offeror incorrectly multiplies the hours needed for system integration by 2 in one part of the technical proposal and uses the same high estimate throughout the technical proposal and cost proposal. The offeror then telephones and states that it wishes to "clarify" the proposal by reducing the labor hours and costs by fifty percent. In this example, you should NOT allow a change through clarification, because it is not obvious that only a minor mistake was made. Indeed, it would not be fair to other offerors to allow one offeror to revise the stated price in this manner.

Example 3 - An offeror's technical approach is unclear as to whether a certain system test will occur before or after all FIP hardware is installed. This is critical because the solicitation requires the test only after all hardware is installed. One proposal section calls for a test on February 2, 199X, and another section specifies the same test on February 12, 199X. In this case, clarification of the exact test date is probably allowed. However, you should not "coach" the offeror to provide the most favorable earlier date.

When in Doubt

The key here is that *if you think a fault in an offeror's proposal is a deficiency, then you should NOT allow the offeror to correct the deficiency through clarification*. In those cases where there is any doubt as to whether there is a minor irregularity or a deficiency, you should consult with the contracting officer and, if necessary, with legal counsel.

40.2 Reviewing Proposals for Commercial Terms and Conditions

Reviewing Proposals

One of your responsibilities may be to review the proposals submitted by the various offerors in order to determine whether the offerors have included commercial terms and conditions. Of course, this review is in addition to the technical evaluation process.

Commercial Terms and Conditions

One problem that you may encounter in your review of the offerors' proposals is the use of commercial terms and conditions that may not be consistent with the terms and conditions that you specified in the solicitation. These commercial terms and conditions may not apply to a Government solicitation or may not be acceptable.

If the offeror used commercial terms and conditions that are NOT consistent with those specified in the RFP, then you must determine the meaning and intent of those terms and conditions.

For example, suppose the RFP specified a computer would be packed for transport in accordance with a certain Government standard, but the offeror's proposal stated that the item would be packaged "in accordance with standard commercial practice." The standard commercial practice for this packaging might be more advantageous or less advantageous to the Government, but you might not know unless you discussed this with the offeror.

Those areas where the use of commercial terms and conditions may cause a problem and require discussions include:

- data rights
- warranties
- effectiveness level
- current production
- special programs
- pack/packing/package

Data Rights

The first area where commercial terms and conditions may cause a problem concerns *data rights*. The offeror's proposal may contain terms and conditions which offer restricted data rights in accordance with standard commercial practices, such as the licensing laws of a certain state, that may not be acceptable to the Federal Government.

(Topic continued on next page)

40.2 Reviewing Proposals for Commercial Terms and Conditions

(continued)

Data Rights (continued)

FAR 27.401

For example, in some cases, the Government's need for unlimited data rights can be critical, because it wishes to extend use of a FIP resource throughout Federal Government agencies without restriction. Or, the Government may wish to allow other contractors (third parties) to maintain hardware or software (FAR 27.401).

In such cases, commercial terms and conditions may be inconsistent with those required in the solicitation. *If the commercial terms and conditions offered for data rights do not conform to the solicitation, this alone does not necessarily make the proposal nonresponsive.* However, you should note this as a matter for possible discussions. You can still eliminate the offeror during discussions if it refuses to modify the data rights to meet Government requirements.

Warranties

Warranties are another matter where the offeror's use of commercial terms and conditions may not be in accordance with the solicitation. For example, commercial warranties often state that hardware guarantees are voided if certain types of maintenance are performed by parties other than the original equipment manufacturer (OEM).

FAR 52.246-19

Or, you may have adopted and inserted a clause from FAR 52.246-19 specifying a "45 days after delivery for repairs," warranty period, while the offer specifies a standard commercial period of only 30 days.

Again, this difference, by itself, does not necessarily make an offer nonresponsive, but it is a matter which should be noted for discussions. If the offer is otherwise advantageous, it may be possible to negotiate more favorable warranty terms.

Effectiveness Level

A third area where an offeror may use commercial terms and conditions is the "effectiveness level" (also called availability level). Effectiveness level normally relates to the overall operating capacity, or effectiveness, of a FIP resource. It refers to how effectively a FIP resource will perform and is closely related to the concept of reliability. For example, the effectiveness level of a main frame computer system largely depends on its ability to keep operating without breakdowns or shutdowns. Unless the effectiveness level is explained by the offeror, it may not be in accordance with the Government's understanding. Again, this may be a topic for discussions.

(continued on next page)

40.2 Reviewing Proposals for Commercial Terms and Conditions

(continued)

Current Production

A fourth area where commercial terms and conditions may cause a problem is “current production.” Current production can simply refer to the model of hardware or version of software currently in production, but not necessarily that model which is the most technologically advanced, or otherwise most advantageous to the Government.

For example, a company may be producing, installing and marketing two different generations of microprocessors (computer chips) in its hardware at the same time. Both would be “current production,” but one might be much more advanced than the other. Or, a company may only *expect* to have a certain model in production when proposals are evaluated and offer it as “current production” when it may not yet be in production.

To avoid this confusion, you can inform offerors that “current production” is considered to be those items in production as of the date the proposal was submitted. This should be clearly defined in the Solicitation.

Special Programs

Special programs are a final area where the use of commercial terms and conditions may be cause for concern. A special program can arise when the Government requires a combination of several different commercial items which are not normally offered together, assembled as an end item. For example, the Government may ask offerors to assemble a special computer from commercially available components including a very fast central processor, very large memory storage and special input/output devices. All of these items might be separately available commercially but not in combination. In this case, the contractor will obtain the separate components, connect and assemble them, and package them according to the Government’s requirements.

However, in such a case, extensive discussion might be needed to determine if the offerors can perform the work required, including obtaining all the components, and data rights, assembling them and delivering and maintaining the completed items.

40.3. The Need to Sanitize Technical and Cost Proposals

What is
Sanitizing?

“Sanitizing” refers to the practice of ensuring that identification of offerors or other unwanted information (such as corporate logos) are covered up or removed from the copies of the proposals that are to be seen and evaluated by the evaluation team. You can sanitize proposals by covering all logos and mentions of the offeror and photocopying the pages. Each offeror’s proposal is then assigned a different number. The evaluators will then receive only the photocopied versions, minus all logos and corporate references, and identified only by a number, such as “Offer No. 1”. Only the contracting office retains the original copies and then knows which proposal was submitted by which offeror.

In some agencies, evaluators’ copies of proposals are bound in a standard binder, such as a three-ring notebook, so that visual differences among the offerors proposals are minimized. Of course, the measures that you will take to sanitize proposals will depend on the standard operating procedures in your agency.

The Need to
Sanitize

FAR 52.215-7

One of your responsibilities may be to sanitize the technical and cost proposals submitted by the various offerors, before these proposals are seen and evaluated by members of the evaluation team. The reason you will sanitize the proposals is to prevent the members of the evaluation team from being unduly influenced by the appearance or name of the offeror. The goal is to have the evaluators focus on the content of the proposals, rather than their appearance or origin. The best-looking (visually appealing) proposal is not necessarily the most advantageous to the Government.

Remember that you are required to insert an excerpt from FAR 52.215-7 in the solicitation, warning against unnecessarily elaborate proposals or quotations:

“Unnecessarily elaborate brochures or other presentations beyond those sufficient to present a complete and effective response to this solicitation are not desired and may be construed as an indication of the offeror’s lack of cost consciousness. Elaborate art work, expensive paper and bindings, and expensive visual and other presentation aids are neither necessary nor wanted.”

40.3. The Need to Sanitize Technical and Cost Proposals *(continued)*

Proposal
Preparation
Instructions

FAR 15.406-5(b)

For these reasons, you may require the offerors to follow detailed instructions in the preparation of the proposals to minimize undue influence. For example, you might limit the use of color or corporate logos, prescribe a page layout, size of type and illustrations and graphics. This is done in an effort to standardize the layout and appearance of the proposals and deny any one offeror an advantage based on visual appearance alone. Your instructions on preparation of the proposals will be included in Section L of the solicitation, in accordance with FAR 15.406-5(b).

However, even if all the proposals look alike, the identification of a certain offeror might be enough to sway one or more evaluators. For this reason, it is a good idea to sanitize the proposals, removing identification of the offeror.

40.4 Safeguarding of Proposals

Need to Safeguard Proposals

There is a requirement to safeguard proposals submitted by all offerors in response to a solicitation. This is true for all proposals, not only FIP resources proposals.

The need to safeguard proposals is related to the requirement to establish and preserve trust in the Government's review and evaluation of proposals. FIP resources proposals often contain advanced proprietary information which can be very advantageous to the Government. However, offerors may be reluctant to submit such advanced proprietary technology if they lack confidence in the Government's handling of proposals, or in the Government's handling of sensitive cost and price information. For this reason, you should follow established agency procedures to ensure proposals are handled at all times in a manner that will safeguard the information contained in proposals.

40.4 Safeguarding of Proposals (continued)

Procedures for Safeguarding Proposals

Each agency has specific guidelines or standard operating procedures for handling and safeguarding proposals. However, certain procedures are common to nearly all agencies. These common procedures for unclassified proposals usually include, but are not limited, to typical measures such as shown in the following table.

TYPICAL PROCEDURES FOR SAFEGUARDING PROPOSALS	
	<ol style="list-style-type: none">1. <i>Procurement Integrity and nondisclosure certificates signed by all participants (including evaluators) and kept on file.</i>2. <i>Immediate registration and log-in of all proposals, to originate the chain of custody that begins when the proposal arrives in the Government's possession.</i>3. <i>Immediate storage of the proposals in a central repository, such as a container or cabinet in the contracting office or a designated room that can be secured (locked) and to which access is limited to a roster of persons with a "need to know". This may be a room set aside for the later use of the evaluators who will rate the proposals.</i>4. <i>Restricted access thereafter to the site or location where the proposals are stored. Typically, no proposals can be removed except by designated persons, such as the contracting officer or the contract specialists.</i>5. <i>Copying and sanitizing the documents to remove unnecessary or unwanted identification of offerors from the copies. At the same time, the various volumes are separated for distribution to the respective evaluation groups or teams. For example, the cost proposals are segregated so that technical evaluators do not see any of the cost or price data that might prejudice them in favor of or against a specific proposal.</i>6. <i>Distribution of ONLY the sanitized copies of proposals to the respective evaluators, with instructions on how they are to be safeguarded and handled during evaluation. Typically, the proposals are not to be removed from the room where the evaluators work, except by an authorized person, such as a contract specialist or appointed recorder.</i>7. <i>Evaluators are also forbidden to contact any offeror directly, or to discuss the proposals outside of the room where the evaluation is performed. Any requests for clarifications or additional information (such as explanation of an irregularity) is requested in writing on a form provided for that purpose and submitted to the head of the source selection board, or other person designated to carry out all external communications. The proposals may also be collected and locked up at the end of each work day and redistributed by the same person the following morning.</i>

(continued on next page)

40.4 Safeguarding of Proposals *(continued)*

Disclosure and
Use of
Information
before Award

FAR 15.413 FAR 52.215-12

Remember that there are restrictions on the disclosure and use of information during and after evaluation and before award. FAR 15.413 specifies that none of the information contained in proposals or concerning the number or identity of offerors shall be made available to the public or to anyone in the Government not having a validated need to know.

In addition, offerors may wish to further protect their trade secrets and proprietary data by placing restrictions on the disclosure and further use of such data, by marking it in accordance with FAR 52.215-12.

Since FIP resources acquisitions can be intensely competitive, you must be especially careful to safeguard proposal data.

Handling
Classified
Proposals

Of course, if the proposals contain any classified information, the procedures for handling must be in accordance with the agency's guidelines for handling classified material. This would include adding marking to identify the material as classified and ensuring handling only by personnel with an appropriate security clearance.

SUMMARY

In this chapter, you learned about the actions you should take in processing the proposals for a FIP resources acquisition. The next chapter will show you how to relate the Source Selection Plan evaluation criteria to the technical evaluation to result in an effective technical evaluation.

CHAPTER 41

TECHNICAL EVALUATION FOR FIP RESOURCES

Chapter Vignette

“What about the technical evaluation of the offers submitted for a FIP resources acquisition,” asked Mark, “is that process different in any way?”

“Well,” Marcia replied, “in the technical evaluation of proposals for a FIP resources acquisition, you must be sure to relate the Source Selection Plan evaluation criteria to the technical evaluation process in order to obtain an effective technical evaluation. That is true of any effective source selection technical evaluation process. You must also be fully aware of the areas which illustrate mandatory, evaluated and subjective technical requirements. Many of the Government’s FIP resources acquisitions end in protest actions, so you must be sure to follow the evaluation criteria, and establish and document a good audit trail, so the Government will have a defensible case in a protest.”

Course Learning Objectives

At the end of this chapter, you will be able to:

Overall:

Relate the Source Selection Plan evaluation criteria to the technical evaluation to result in an effective technical evaluation.

Individual:

- 41.1 Identify the steps in a Technical Evaluation
- 41.2 Generalize areas which illustrate mandatory, evaluated, and subjective technical requirements.

Chapter Overview

Scope

This chapter reviews how to relate the Source Selection Plan evaluation criteria to the technical evaluation to result in an effective technical evaluation. It also discusses the areas which illustrate mandatory, evaluated, and subjective technical requirements, and provides examples which would require the Government to modify its requirements in order to maintain competition.

As a contract specialist or contracting officer, you will probably not be applying technical evaluation factors, but you must understand the technical evaluation factors and be prepared to train and guide the technical evaluators in their application, in strict accordance with the SSP. This chapter therefore focuses on your responsibilities in the evaluation process for a FIP resources acquisition.

Topics in This Chapter

This chapter includes the following topics:

SECTION	TITLE	PAGE
41.1	Technical Evaluation Overview	41-4
41.2	Mandatory, Evaluated and Subjective Technical Factors	41-12

References

In order to perform the tasks discussed in this chapter, you would normally have access to the following documents and references during an actual technical evaluation:

- A Source Selection Plan (SSP) developed earlier, to include the technical evaluation factors developed by technical personnel.
 - The solicitation, including the Statement of Work (SOW) and any technical specifications.
 - Any special policy guidance or directives from the agency.
 - Information from outside advisors, if they are used in this procurement.
 - Technical evaluation reports from evaluation board members.
 - The various offers (proposals).
 - The GSA's publication entitled *Source Selection: Greatest Value Approach*
-

41.1 Technical Evaluation Overview

Technical Evaluation

This section discusses the technical evaluation of proposals for FIP resources. At this point, you should already be familiar with the process for source selection, including technical evaluation, although you may never have participated in an evaluation for a FIP resources acquisition.

This section briefly reviews the technical evaluation process which is part of source selection, with *emphasis on the steps that you should perform* as a contract specialist or contracting officer to ensure success of the technical evaluation.

Document KMP-92-5-P

This chapter stresses the “best value” or “greatest value” approach. For more information on this approach, you can obtain the GSA’s publication entitled *Source Selection: Greatest Value Approach*.

In many ways, the technical evaluation process for a FIP resources acquisition is very similar to the technical evaluation process for any other commodity, but there are some differences and areas of emphasis that you should understand.

For example, technical evaluation in a FIP resources may emphasize issues such as compatibility with existing resources, ease of conversion, validation of performance claims, and other technical evaluation issues that you would not frequently encounter in acquiring most other commodities. Of course, the specific evaluation factors that you will encounter in FIP resources proposals will depend on the nature of those acquisitions. The areas evaluated by the factors may include requirements which are subjective and hard to agree on.

Follow the Source Selection Plan Closely

You will recall that the goal of the technical evaluation is to determine the most advantageous offer. You must therefore ensure that the technical evaluation process closely follows the source selection plan (SSP) which you developed earlier. (See Chapter 38, “Source Selection for FIP Resources.”)

If you permit the evaluators to depart from the SSP, ***the evaluation process may be flawed and provide grounds for a later protest by offerors.***

Of course, if you developed a poor or incomplete SSP, the evaluation process may not succeed in determining the most advantageous offer.

(continued on next page)

41.1 Technical Evaluation Overview *(continued)*

“Greatest Value” Approach

FAR Part 15 FIRM 201-39.15

As you learned in Chapter 3, “Policies That Apply to the Acquisition of FIP Resources,” the GSA has issued guidelines on the “greatest value” approach for acquisition of FIP resources. Together with the policy established in Part 15 of the FAR and the FIRM (Subpart 201-39.15), these will govern the technical evaluation for the “greatest value” approach, in a FIP resources acquisition.

Requirement for Meaningful Analysis

FAR Part 15 FIRM 201-39.15

You will recall that the GSA guidelines call for the evaluators to conduct a *meaningful analysis* (no fudging) to demonstrate the value of the differences among competing proposals. Further, in order to withstand a protest, it is necessary to be able to show, through your documentation, that such a meaningful analysis did occur, using the evaluation factors stated in Section M of the RFP.

If there is a protest after award, you can prove that a meaningful analysis occurred if you can provide complete documentation for the evaluation process under the conditions for value contracting. The requirements for a meaningful analysis and a valid evaluation are:

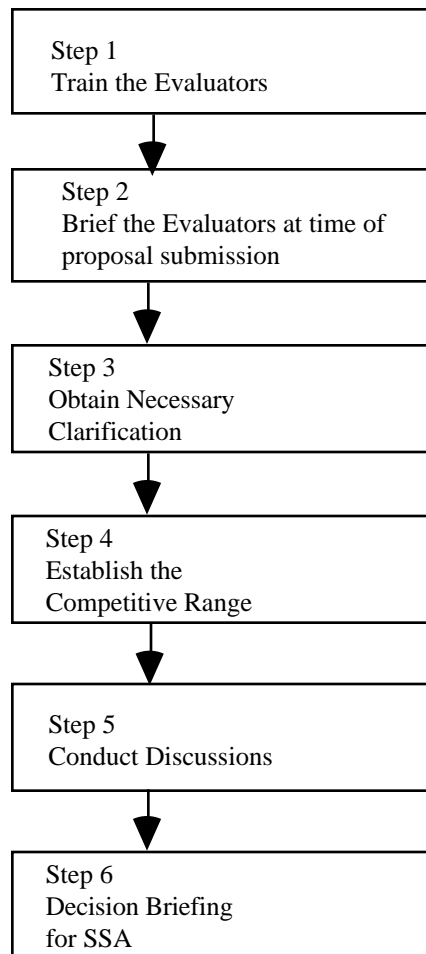
1. *You must have prepared a comprehensive SSP*, stating the goals and proposed methods of evaluation and source selection. (See Chapter 38, “Source Selection.”)
2. Whenever possible, you should have included *functional specifications* in the solicitation instructions, and specified all the evaluation factors and subfactors that will be used to evaluate the proposals. (See Chapter 39, “Development of a Solicitation for FIP Resources.”)
3. *The evaluators must have the required expertise* to evaluate the proposals and document problem areas. (Note - even technical experts may not know how to evaluate proposals properly and you may have to train them. See Chapter 38.)
4. *The final ratings may be based on the scoring of the technical evaluators.* (There is much misunderstanding over consensus which is used in most instances. It does NOT mean a simple majority nor does it mean that evaluators should avoid discussing their ratings with one another. In fact, discussion is encouraged in order to arrive at consensus ratings for each factor. See Chapter 38.)
5. *Evaluate the total life cycle cost* (not just purchase cost), determine the competitive range and hold discussions with ALL offerors in the competitive range.

(continued on next page)

41.1 Technical Evaluation Overview *(continued)*

Steps in the Evaluation Process

If you are in charge of the technical evaluation, there are several steps that you should follow in order to ensure that a meaningful analysis **does** take place and that the technical evaluation for all factors is completed properly. The following flowchart shows these steps.



(continued on next page)

41.1 Technical Evaluation Overview *(continued)*

Step 1 Train the Evaluators

The first step is to train the evaluators. In many cases, the technical evaluators may not be familiar with their evaluation duties and may not understand the complex technical evaluation process, even if they wrote the evaluation factors earlier.

Therefore, you must ensure they have time to become fully trained and familiar with the:

- Requirements, standards and specifications in the solicitation;
- Source Selection Plan (or Technical Evaluation Plan), including a full understanding of the evaluation factors and subfactors and how they will be applied;
- Rating system (numerical, color, or adjectival) that will be used, and the supporting documents (forms) that will document the evaluation process.

This all takes time, possibly several weeks in a complex FIP resources evaluation, so allow time before the proposals are due to be evaluated.

Step 2 Brief the Evaluators

The next step is to brief the evaluators. You should give concise but complete instructions to the evaluators so they understand their responsibilities. As a minimum, your briefing should tell the evaluators that they must:

- Thoroughly examine each proposal and measure it strictly and only against the evaluation factors.

CAUTION THE EVALUATORS NOT TO MEASURE ONE PROPOSAL AGAINST OTHER PROPOSALS.

- Evaluate technical proposals solely on the technical factors and subfactors. In most cases, the technical evaluators should not even have access to the cost proposal data, as this might prejudice their judgment. Announce deadlines.

(Topic continued on next page)

41.1 Technical Evaluation Overview *(continued)*

Step 2
Brief the
Evaluators

- *Identify any ambiguous statements or claims in the proposals that will require additional information before they can do a fair evaluation.* They should request any clarification only on the forms provided to the panel for this purpose.
 - *Identify the risks, strengths and weakness of each proposal.* Remind the evaluators that they must discuss these areas among themselves until they reach a **consensus** if that methodology is being used. Then they must completely document their findings and ratings.

This includes identifying all deficiencies, unresponsive, and unacceptable proposals.
 - *Consider only the total cost evaluation.* Remind the cost evaluators that total acquisition life cycle cost (not just “up front” purchase cost) must be considered in the cost evaluation. Cost realism must be considered for each phase of the acquisition cost life cycle. In a FIP resource acquisition, they must consider the life cycle costs even if this type of data was not requested nor provided by the offeror.
-

Evaluation Factors
in the SSP

You will recall that the evaluation factors are fully explained in the Source Selection Plan (SSP) or the Technical Evaluation Plan (TEP), which may be a part of the SSP. These documents were prepared earlier in the acquisition planning phase. Remember, the technical experts in the requiring agency are usually responsible to develop the technical evaluation factors, which they may later apply as members of the evaluation board.

Source Selection
Plan

For example, if a FIP system integration requires use of subcontractors, one technical evaluation factor might be the “effectiveness of the subcontracting plan,” to explain how subcontractor efforts would be integrated into the overall project. These evaluation factors would be spelled out in the SSP and in the solicitation.

Also, if the acquisition includes integration of new FIP resources into an existing network, there could be a requirement for the offerors to submit a *validation plan* or *compatibility plan* to explain how the new and old components will work together. This might include a compatibility demonstration by the offeror(s). There could also be technical evaluation factors or subfactors for this area.

(Topic continued on next page)

41.1 Technical Evaluation Overview *(continued)*

Source Selection
Plan
(continued)

Note: Caution the technical evaluators that they must follow the evaluation criteria as set forth in the Source Selection Plan. (This information should match Section “M” in the solicitation).

Technical
Assistance

Remember, the technical evaluators are supposed to be qualified to perform the technical evaluation. You may learn that part of the technical evaluation is so complex that some outside expertise (i.e., non-Government advisors) is required. This sometimes occurs in a highly complex FIP system integration project. You may then be responsible to make sure the technical evaluators receive the necessary outside expertise in a timely manner. *Remember, these outside advisors cannot vote on the technical evaluation factors and they cannot have a conflict of interest concerning the acquisition.*

Unless you are careful, the technical evaluation factors may not be applied effectively, the FIP acquisition process may be flawed and a protest can result.

Step 3
Obtain Necessary
Clarification

During a complex FIP resources evaluation, you may find that the technical evaluators may send you several requests for additional information and clarification from the offerors. When this happens, you must be ready to expedite these requests and obtain the requested information as soon as possible for the evaluators.

Be careful in your requests for clarification. Screen the requests for information. Do not let on any information that might provide an advantage to an offeror. Make sure that your requests for clarification are just that, and not clues or tips as to how the evaluation is progressing.

Step 4
Establish the
Competitive Range

Once the evaluators have completed their evaluations, you must then establish the competitive range. Remember, you are not to use any pre-established “cut-off” scores. For example, you cannot determine ahead of time that any offer scoring less than 70 points will be eliminated from the competitive range.

Instead, you should include in the competitive range any offer which has a “reasonable chance” of selection for award. If in doubt, include the offer in the competitive range.

(Topic continued on next page)

41.1 Technical Evaluation Overview *(continued)*

Step 4
Establish the
Competitive Range
(continued)

Document your decisions, because failure to be included in the competitive range is one cause of protests.

Immediately inform (in writing) the unsuccessful offerors, so they waste no more time and money on this effort.

Step 5
Conduct
Discussions

The next step is to conduct discussions with those offerors in the competitive range. Remember:

- The discussions must be “meaningful,” and in good faith.
- Avoid “coaching,” “technical leveling,” “technical transfusion,” and disclosing information about another offeror’s proposal, especially if proprietary technical information is concerned.
- Make exactly the same information available to all offerors.

Based on your discussions, you will eventually arrive at an award recommendation and a decision briefing for the SSA.

Step 6
Decision Briefing
for the SSA

You will recall that, after the Source Selection Board has completed its evaluation and provided you a report, you must give a decision briefing to the Source Selection Authority (SSA), if the FIP resources acquisition is a formal source selection.

The technical ratings and your recommendations will be guides for the SSA, who will base the final source selection decision on the relative strengths and weaknesses of each proposal, *as you documented them during the evaluation.*

Remember, in a “greatest value” approach, you will not necessarily recommend award to the offeror with the lowest cost. If the highest-rated technical proposal does not have the lowest cost, the SSA must exercise judgment and decide whether the extra technical superiority is worth the extra cost.

(continued on next page)

41.1 Technical Evaluation Overview *(continued)*

The
Cost/Technical
Trade-off

The most difficult part of the “greatest value” analysis may be the trade-off between cost and the technical factors. *You will have to do this trade-off before you can recommend a source to the Source Selection Authority (SSA) in the source selection decision briefing.*

The GSA guidelines suggest that you do this trade-off as follows

- Determine the proposal discriminators by comparing the significant strengths and weaknesses among the proposals;
(Example - one proposal might be strong in all the areas of the technical approach and business management factors, but higher in cost, while another might be low in cost and weaker in technical or business management factors.)
- Identify those areas that would be affected (either positively or negatively) by the proposal discriminators;
(For example, if there is a high risk in the project, requiring highly qualified “Key Personnel” resumes would be one discriminator which affects the area of “risk.”)
- Define each discriminator as either quantifiable or non-quantifiable.
(For example, “Hard Disk Storage Capacity” and “Computer Processing Speed” are quantifiable; you can measure them with numbers. If you cannot measure an evaluation factor with numbers, it is “non quantifiable.”)
- Emphasize those technical features, such as a superior level of effectiveness or better key personnel, that exceed the minimum mandatory requirements.

Documentation of trade-off decisions is very important.

The resultant contract should emphasize those technical additions or features that exceeded the minimum requirements for which the offeror may have received the award. These additional features should be highlighted so that those persons administering the contract will have as guideline for what additional effort should be expected from the contractor.

(continued on next page)

41.2 Mandatory, Evaluated and Subjective Technical Factors

Mandatory,
Evaluated and
Subjective
Technical Factors

The areas for evaluation may be mandatory, evaluated and subjective technical factors in a FIP resources evaluation. In the evaluation, you will find that some technical evaluation factors are mandatory (they **MUST** be included), some are not mandatory, but can be evaluated quantitatively and more objectively, and some are really subjective.

Mandatory Factors

Some evaluation factors in a FIP resources acquisition are always mandatory. For example, you should already know that *cost is always a mandatory factor*, regardless of the other evaluation factors, and regardless of whether or not the “greatest value” approach is used. That means that you **MUST** consider cost in your evaluation of offers and in preparing your decision briefing for the SSA.

FAR 10.006

In some cases, you may have an evaluation factor to measure compliance with a mandatory specification or standard. FAR 10.006 discusses use of mandatory specifications and standards. Basically, it explains that, *unless otherwise authorized by law or authorized by a deviation, you must use the specifications and standards listed in the GSA Index of Federal Specifications, Standards and Commercial Item Descriptions*. (Refer to Chapter 2 standards) This will sometimes determine which technical evaluation factors in the solicitation will be mandatory.

Basically, the mandatory factors are those technical evaluation factors which will be used to determine whether the minimum requirements are met by an offer

For example, if an agency has a stated minimum requirement for a printer that prints 1,000 shades of color, then that capability is a mandatory factor which must be considered, and the specifications and standards for that type of item must be used. On the other hand, if speed of manual loading for the paper trays is NOT essential, then this cannot be a mandatory factor for technical evaluation.

Mandatory
Standards for
DOD
Procurements

If the procurement is for a DoD requirement, you must use military specifications and standards, including those voluntary standards listed in the DODISS, except for authorized exceptions.

(continued on next page)

41.2 Mandatory, Evaluated and Subjective Technical Factors *(continued)*

Exceptions

Of course, FAR 10.006 permits exceptions to the use of mandatory specifications and standards. The following table shows the conditions which must be met for exceptions.

Conditions Which Must Be Met for Exceptions to The Use of Mandatory Specifications and Standards	
<ol style="list-style-type: none"> 1. The item(s) are required under an “unusual and compelling urgency;” or 2. Under the small purchase limitations (FAR 13.000); or 3. For products acquired and used overseas; or 4. For items acquired for authorized resale; or 5. For construction or new installations of equipment, where nationally recognized industry or technical source specifications and standards are available. 	

Subcontracting Plan as a Mandatory Factor

Some technical evaluation areas also require mandatory consideration of certain factors. For example, *if the offeror proposes to use subcontractors in a project, a subcontracting plan is a mandatory factor for technical evaluation.*

Quantifiable Technical Factors

Some technical evaluation factors are not mandatory, but can be evaluated in a *quantifiable* manner, using numerical methods. An example is a point scoring system for measuring a computer’s speed, such as in a “benchmarking” test. It is easy for the evaluators to measure and agree on the speed of a computer, using quantitative measuring devices and awarding points for the demonstrated speed.

(continued on next page)

41.2 Mandatory, Evaluated and Subjective Technical Factors *(continued)*

Subjective Technical Factors

In some areas, the technical evaluators may wish to use technical evaluation factors which are *subjective and non-quantifiable* (can't be truly measured using quantitative or number systems).

The problem with using subjective evaluation factors is that, because they are not quantifiable, different evaluators may NOT be able to agree on their application, so it may be difficult to apply the evaluation factor *consistently* to all offers. Also, it is easier for an offeror to challenge a subjective evaluation factor.

For example, suppose there is a technical evaluation factor called "ease of use," for a software application. How would you evaluate "ease of use" and determine the best offer? Would you measure the number of hours it takes to learn the application? The number of mistakes made by a novice? Administer a questionnaire to users?

The point is that unless you had an acceptable quantitative method to measure "ease of use" as a technical evaluation factor, this factor would be entirely subjective and open to challenge.

For this reason, you should be very careful about using subjective and non-quantifiable evaluation factors. If you have any doubt about whether a technical evaluation factor might be too subjective, ask "How will we measure or evaluate this?"

Examples

Certain areas often require mandatory factors for technical evaluation in a FIP resources acquisition. Of course, the actual technical evaluation factors will depend on the nature of the specific acquisition. The table on the following page provides some common examples of the areas that will usually require mandatory factors. Note that these areas can be evaluated either through factors or subfactors.

(continued on next page)

41.2 Mandatory, Evaluated and Subjective Technical Factors *(continued)*

Examples
(continued)

Examples of Mandatory Areas for Technical Evaluation
<ul style="list-style-type: none"> • <i>Technical Approach</i> - an explanation of how the offeror proposes to meet the technical requirements, such as systems integration, for the newly acquired system. May require separate plans for hardware, software, training, maintenance, and other services, such as subcontracting, as subfactors. May require a detailed integration plan or validation demonstration. • <i>Risk Assessment Plan</i> - a detailed plan required from the offeror, explaining its understanding of the risks, barriers and dangers to success of the acquisition. Sometimes a separate factor and often a subfactor under the Technical Approach factor. • <i>Project Management</i> - an explanation of how the offeror will manage the project. May include an explanation of offeror's financial responsibility and subfactors such as evidence of "Past Performance" (project summaries), an important consideration when an integrating contractor will be used to manage many subcontractors. May include a subcontracting plan here or under the "technical approach" factor. • <i>Key Personnel</i> - resumes often required as a factor or subfactor to demonstrate key personnel qualifications in a high risk acquisition.

SUMMARY

In this chapter, you learned to relate the Source Selection Plan evaluation criteria to the technical evaluation to result in an effective technical evaluation. In the next chapter, you will learn to consider all price-related factors unique to FIP resources, accurately calculate evaluated prices, and correctly adjust the data for equitable comparison with proposed prices.

CHAPTER 42

ESTABLISHING PRICE OBJECTIVES IN A FIP RESOURCES ACQUISITION

Chapter Vignette

Marcia was continuing her explanation of a FIP resources acquisition evaluation to Mark. “When you come to the matter of establishing the price objectives in a FIP resources acquisition,” she said, “you will find it is very similar to the procedures that you would follow in any large acquisition. However, you must consider all the price-related factors that are unique to a FIP resources acquisition, accurately calculate the evaluated prices, and correctly adjust the data to equitably compare the proposed prices,” she said.

“You must learn how to apply the price-related factors which are unique to FIP resources,” she went on, “and you will have to know how to construct a prenegotiation memorandum and a price negotiation memorandum for a FIP resources acquisition.”

Course Learning Objectives

At the end of this chapter, you will be able to:

Overall:

Consider all price-related factors unique to FIP resources, accurately calculate evaluated prices, and correctly adjust the data to equitably compare the proposed prices.

Individual:

- 42.1 Evaluate price proposals and calculate the lowest priced offer using BARS or a commercial spreadsheet.
- 42.2 Compare price proposals.
- 42.3 Construct a prenegotiation memorandum for a FIP resources acquisition.

Chapter Overview

Scope

This chapter explains how to consider the price-related factors unique to FIP resources, accurately calculate evaluated prices, and correctly adjust the data to equitably compare the proposed prices.

Finally, it explains how to construct a prenegotiation memorandum for a FIP resources acquisition.

Topics in This Chapter

This chapter includes the following topics:

SECTION	TITLE	PAGE
42.1	Evaluating Price Proposals	42-4
42.2	Comparing Price Proposals	42-12
42.3	Construct a Prenegotiation Memorandum	42-18

References

You may need the following key references available in order to understand the topics in this chapter:

FAR 15.6, 15.8, 17.1, 22.1, 25.1, 25.4, 27.2, 47.3, 52.215-34. 52.217-3 through -5, 52.220-1, 52.227-6 through 8, and 52.247-45.

FIRMR Bulletin C-35

DFARS 215.8

42.1 Evaluating Price Proposals

Introduction

Remember in Chapter 30, you determined the lowest priced alternative. The process for evaluating price proposals is the same when other than purchase is solicited.

OMB Circular A-94

Recall that if you asked for both lease and purchase options in a solicitation, then you must do a lease-purchase analysis, to meet the requirements of OMB Circular A-94, *Guidelines and Discount Rates for Benefit-Cost Analysis of Federal Programs*. (See Chapter 29, Lease Vs. Purchase of FIP Resources.)

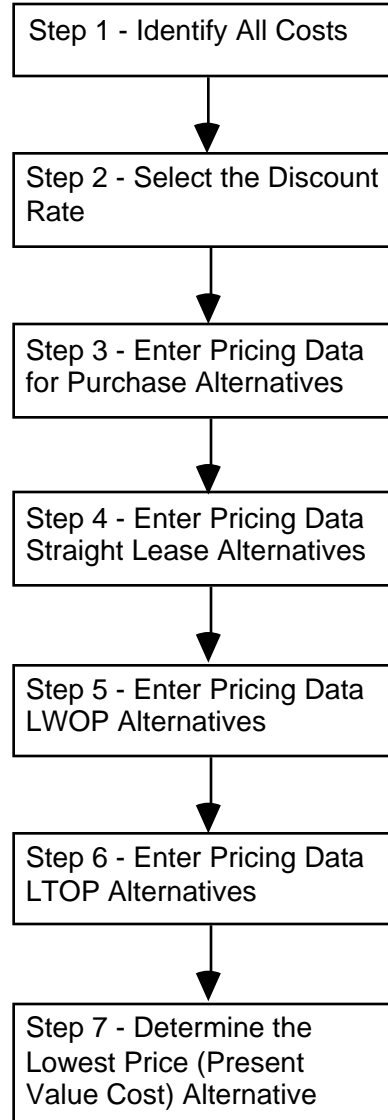
Don't be confused. You may already have done a benefit-cost analysis BEFORE you decided to acquire the FIP resources. NOW you are doing a lease vs. purchase analysis as part of proposal evaluation, if the following conditions apply.

Perform Lease Versus Purchase Analysis as Part of Proposal Evaluation...
<p>IF...</p> <ul style="list-style-type: none"> • You are acquiring a CAPITAL ASSET or a group of related assets, • With a fair market value exceeding \$1 million, <p>And One or More of the Following Conditions Apply...</p> <ul style="list-style-type: none"> • Would be leased for three or more years, • Is new, with an economic life of less than three years and would be leased for a term of 75% or more of its economic life, • Is built expressly for lease to the Federal Government, OR, • Is leased to the Federal Government and clearly has no alternative or commercial use,
<p>AND...</p> <ul style="list-style-type: none"> • <i>You requested lease and purchase options in the solicitation ...</i>
<p>THEN...</p> <ul style="list-style-type: none"> • <i>You must follow OMB Circular A-94, and perform a lease-purchase analysis as part of the proposal evaluation process.</i>

42.1 Evaluating Price Proposals *(continued)*

Systematic Data Entry

Use the following steps to enter the price schedule data for each of the four acquisition alternatives. In order to avoid confusion, it helps if you do the data entry and analysis in a systematic manner either for each offeror. In the following examples, we have chosen to enter the data for each alternative offered.



42.1 Evaluating Price Proposals *(continued)*

Step 1 - Identify All Costs

The first step is to determine all the appropriate price-related factors and costs that are to be analyzed. These have been identified in the acquisition plan and, as necessary, also discussed in the source selection plan and solicitation. Be careful here to ensure that you have not overlooked any hidden costs. Storage, installation, maintenance, transportation, or other costs can sometimes be overlooked or underestimated. Look out for exceptions based on dollar ceilings that are subject to change. Ensure that you capture all costs for multiple year acquisitions and options (most agencies calculate on a monthly basis rather than yearly).

Step 2 - Select the Discount Rate

The next step is to select the discount rate you will use. See Appendix C of OMB Circular A-94. Remember, you will probably use the nominal interest rate for this purpose. You can also obtain the discount rate from your agency finance office.

You can also calculate the discount rate. For example, suppose that in this case the discount is seven percent (7%). This would result in a discount rate of .9346. How did you obtain .9346? You divided 1 by 1.07. (See page 29-17 of this text/reference. It shows that for one year, a 7 percent discount yields a yearend discount rate of .9346.)

$$1/1.07 = .9346$$

What does this mean? It means that one year from now, you only have to pay .9346 (not quite 94 cents) in today's money for every dollar charged. Put another way, a dollar of next year's price will only cost the Government about 94 cents in this year's money. Of course, if you were calculating for more than one year, you would continue to multiply by 1.07 for each year to obtain the discount rate for that year. So, for the second year, the discount rate in our example would become:

$$1/(1.07 \times 1.07) = .8734$$

(continued on next page)

42.1 Evaluating Price Proposals *(continued)*

Step 3 - Enter Pricing Data for Purchase Alternatives

The next step is to enter the pricing data for the purchase alternatives. Include the Unit and Total prices for each CLIN and SUBCLIN that was proposed. On a large scale acquisition, this could include hardware, software, services, and support services, such as maintenance. Enter this data on the sheet(s) or electronic spreadsheets specified for the purchase option. When you complete this step using an automated spreadsheet program, the computer can show you the price of the highest, lowest and all other purchase alternatives, by offeror. The data might look like the following example for hardware:

Hardware	Purchase
Offeror A	\$500,000
Offeror B	\$525,000
Offeror C	\$550,000
Offeror D	\$575,000
Offeror E	\$600,000

Understand what this means. It shows that, in present value terms, if you acquire the hardware from any of the five offerors and pay the full price at the end of this current year, the Government must pay the amounts shown in this year's dollars. In this case, Offeror A offers the lowest cost alternative. If you did not ask for lease-purchase options in the solicitation, this would be the end of your calculations.

However, suppose that Offeror B proposed a special financing plan to allow payment of \$300,000 the first year and \$225,000 the second year and the discount rate was 7%.

You would then convert the \$225,000 for the second year by multiplying it by that present value factor to show the present value of \$225,000 for the second year:

$$\text{\$225,000} \times .9346 = \text{\$210,285}$$

(Topic continued on next page)

42.1 Evaluating Price Proposals *(continued)*

Step 3 - Enter Pricing Data for Purchase Alternatives (continued)

On a computer spreadsheet, it might look like this:

Hardware	Purchase	2d Year	Total Price
Offeror A	\$500,000		\$500,000
Offeror B	\$225,000	\$210,285	\$435,285
Offeror C	\$550,000		\$550,000
Offeror D	\$575,000		\$575,000
Offeror E	\$600,000		\$600,000

What's this? Suddenly Offeror A no longer offers the lowest cost alternative. You can see that Offeror B is now the lowest cost offeror. At this point, you might now wish to electronically transfer or “paste” the data in the fourth column into another column or spreadsheet and re-title it as “Purchase Alternatives,” instead of “Total Cost.”

Step 4 - Enter Pricing Data for Straight Lease Alternatives

Next, enter the pricing data for each of the straight lease alternatives. When you complete this step using an automated spreadsheet program, the computer can show you the price of the highest, lowest and all other straight lease alternatives, by offeror. For example, suppose that only Offeror C offered a three year straight leasing plan, for \$200,000 over each of three years. After you converted the dollars to present value, it might look like the following example.

Hardware	Year 1	Year 2	Year 3	Total Cost
Offeror A				
Offeror B				
Offeror C	\$200,000	\$188,916	\$174,800	\$563,716
Offeror D	\$			\$
Offeror E	\$			\$

At this point, you might now wish to electronically transfer or “paste” the data in the fourth column into another column or spreadsheet and re-title it as “Straight Lease Alternatives,” instead of “Total Cost.”

(continued on next page)

42.1 Evaluating Price Proposals *(continued)*

Step 5 - Enter Pricing Data for LWOP Alternatives

Next enter the pricing data for all the LWOP alternatives. *Be sure to include purchase option credits (POC) as a percentage of the prices to which they apply and the effective periods of the purchase option credits.* For example, suppose that only Offeror D proposed a LWOP program over three years with the following terms:

1. \$220,000 LWOP for 3 years;
2. 30 percent purchase option credits for money paid up through the end of year 3; and
3. Cash payment for the remaining amount.

To find out if this is an advantageous offer, you would convert the lease costs by year to present value and add the remaining lump sum payment (also converted to present value) as shown in the following spreadsheet. When you complete this step using an automated spreadsheet program, the computer can show you the price of the highest, lowest and all other LWOP alternatives, by offeror. At this point, you might now wish to electronically transfer or “paste” the data in the sixth column into another column or spreadsheet and re-title it as “LWOP Alternatives,” instead of “Total Cost.”

Hardware	Year 1 LWOP	Year 2 LWOP	Year 3 LWOP	LWOP @ 30% POC	Total Cost
Offeror A					
Offeror B					
Offeror C	\$15,000	\$15,000	\$15,000		\$45,000
Offeror D	\$220,000	\$205,612	\$192,148	\$185,328	\$155,000
Lump Sum				\$284,045	
Cumulative	\$220,000	\$425,612	\$617,760	\$1,087,133	\$1,087,133
Offeror E					

Is this LWOP offer the lowest cost so far?

42.1 Evaluating Price Proposals *(continued)*

Step 6 - Enter Pricing Data for LTOP Alternatives

Next, enter the pricing data for each of the LTOP alternatives. Be sure to include the monthly unit prices for each CLIN and each SUBCLIN and the effective periods of the LTOP payments. For example, suppose that Offeror E proposes a LTOP of \$250,000 per year, with payment the end of each year, after which ownership passes to the Government. On paper, the offer first looks like this:

$$\text{Year 1} = \$250,000 + \text{Year 2} = \$250,000 + \text{Year 3} = \$250,000 = \$750,000$$

After you convert the data to present value, it might look like the following example.

Hardware	Year 1 LTOP	Year 2 LTOP	Year 3 LTOP	LTOP Total	Total Cost
Offeror A					
Offeror B					
Offeror C					
Offeror D					
Offeror E	\$250,000	\$233,650	\$218,350		
Cumulative		\$483,650	\$702,000	\$702,000	\$702,000

When you complete this step using an automated spreadsheet program, the computer can show you the price of the highest, lowest and all other LTOP alternatives, by offeror. At this point, you might now wish to electronically transfer or “paste” the data in the sixth column into another column or spreadsheet and re-title it as “LTOP Alternatives,” instead of “Total Cost.”

Step 7 - Determine and Document the Lowest Price Alternative

The next step is to determine the lowest cost alternative for acquisition. If you have selected all the appropriate price-related factors and costs and converted them all to present value, you are now in a position to compare the relative prices for each alternative and for each offeror and to determine the lowest OVERALL cost method for acquiring the FIP resource. Of course one offeror might not be the lowest on any one price-related factor but still be the lowest overall. For example, one offeror might not offer the lowest price for hardware, software, or FIP support services, but might still present the lowest overall price.

(continued on next page)

42.1 Evaluating Price Proposals *(continued)*

Step 7 - Determine and Document the Lowest Price Alternative (continued)

In our simple example, we considered only hardware costs. Of course, you might have to repeat this for software, maintenance, installation, transportation, storage, training and many other price-related factors for a given acquisition. The point is that you should do it in a systematic manner. In our simple hardware example, you should end up with a spreadsheet that looks like the following.

Hardware Offeror	Purchase Alternatives	Straight Lease Alternatives	LWOP Alternatives	LTOP Alternatives	Lowest Total Cost
A	\$500,000				\$500,000
B	\$435,285				\$435,285
C	\$550,000	\$563,716			\$550,000
D	\$575,000		\$1,087,133		\$575,000
E	\$600,000			\$702,350	\$600,000

What does this tell you? It should tell you that, considering only hardware, the least costly acquisition alternative is to *purchase* from Offeror B. Does that mean that you would automatically do so? Not necessarily. If the technical evaluation concluded that Offeror B had the lowest rated technical offer, then you might want to recommend purchase from Offeror A. On the other hand, Offeror E might be so technically superior that it would be advantageous to purchase from E. In any case, you could be confident that purchase would be more advantageous than any other method of acquisition for hardware.

Document your finding for each cost or price-related factor. You might use the suggested format in DFARS 239.73, table 39-1, or a similar agency format. At this point, you are ready to brief the SSA on the lowest cost alternative.

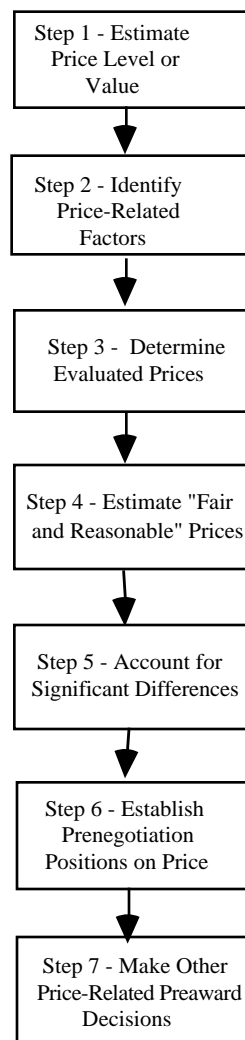
42.2 Comparing Price Proposals

Introduction

Once you have evaluated the price proposals submitted by each offeror, you should then compare offers and the Government's negotiation position. The following provides information that you should address.

Steps to Follow

The following illustration shows the steps that you should follow in order to compare price proposals in a FIP resources acquisition.



(continued on next page)

42.2 Comparing Price Proposals *(continued)*

Step 1 - Estimate Price Level or Value

FAR 15.803(b)

The first step is to estimate the price level or value of the FIP resources (supplies or services) to be acquired, in accordance with the guidance in FAR 15.803(b). This is done in order to calculate the probable range of prices that will be offered and to determine the key price-related factors. This will require that you:

- Determine whether the Independent Government Estimate (IGE) is supported by the facts and documentation provided by the requiring activity or program office. You will recall that the IGE is prepared to indicate what the acquisition should cost. If the market research and other data submitted by the requiring activity do not support the IGE, you may need to contact the requiring activity and reconcile the differences. This can happen, for example, if the IGE was prepared too long before the latest data submitted by the requiring activity.
- Identify the relevant historical pricing data, or data on market trends and prices. In the case of FIP resources, use historical pricing data for hardware with caution, because hardware price data more than two years old may not be indicative of current pricing for newer technology. However, market trends can be very useful in determining pricing data for hardware, software and support services. In the case of telecommunications services, research existing and anticipated tariffs.
- Identify factors that are likely to affect offered prices (e.g., overall levels and trends in supply and demand, market segmentation, and nature and extent of competition). In the case of most FIP hardware, competition is likely to remain intense, and there is probably little chance that one or a few competitors will dominate the market completely. However, for mainframe and supercomputers, or for very specialized computers, there may be only a few qualified offerors and limited competition. This may also be true of some telecommunications services. In the case of software, there are many market segments and niches, and there may be only limited competition for some requirements. In all cases where the competition is limited for technological reasons, you can expect higher or faster price increases.

(Topic continued on next page)

42.2 Comparing Price Proposals *(continued)*

Step 1 - Estimate
Price Level or
Value
(continued)

- *Calculate the range of probable offers.* Once you have accomplished the above, you are then in a position to identify the factors that will drive costs and to calculate the range of probable offers. For example, if you determine that there are only three probable offerors for a certain mainframe computer buy, you can probably determine the price range of their comparable current production models fairly easily. If there are many competitors, such as for microcomputers, you can also get the price range from market data easily.

Step 2 - Identify
Price-Related
Factors

FIRMR Bulletin C-35

Based on your work in Step 1, you are now ready to identify the price-related factors. Remember, not all the price-related factors will apply to every FIP resources acquisition. However, at this point, it should be relatively easy for you to identify the price-related factors relevant to the acquisition. For example, you will consider life cycle costing as a price-related factor in virtually every FIP resources acquisition (unless you intend to scrap the FIP resource within the year).

If you are acquiring microcomputers (“desktop computers”) you are required to consider energy costs. (See FIRMR Bulletin C-35 for guidance.)

The following table may help you to identify the most likely price-related factors for the major types of FIP resources acquisitions.

(Topic continued on next page)

42.2 Comparing Price Proposals *(continued)*

Step 2 - Identify
Price-Related
Factors
(continued)

PRICE-RELATED FACTORS FOR FIP RESOURCES ACQUISITIONS	
FIP Hardware	Lease vs. purchase, Maintenance, Warranty protection or repair, Training, Installation, Technical manuals, Spare parts, Related supplies, Life cycle costing, Energy conservation and efficiency criteria, Transportation, Quantity discounts, Estimated quantities, Buy-in pricing, Finance charges, Options, or Multiple year offers.
FIP Software	Maintenance, Warranty protection or repair, Training, Installation, Life cycle costing, Technical manuals, Licenses and data rights, Incremental pricing or family buys, Quantity discounts, Estimated quantities, Finance charges, Number of users, Options, or Multiple year offers.
FIP Services	Life cycle costing, Options and/or multiyear offers, Assumed economic price adjustments, Estimated quantities.
FIP Support Services	Warranty protection, Training, Installation, Technical manuals, Spare parts, and supplemental supplies, Life cycle costing, Government-furnished property, Options or multiyear efforts, Estimated quantities, Buy-in pricing, Number of Government support personnel required, Response time.
Telecommunications	Tariff price, Finance charges, Warranty protection, Life cycle costing, Assumed economic price adjustments, Options or multiple year offers, Quantity discounts, Termination Liability.

(continued on next page)

42.2 Comparing Price Proposals *(continued)*

Step 3 - Determine Evaluated Prices

FAR 25.105
FAR 25.4
FAR 22.103

At this point, you are ready to determine the evaluated prices for each offer, in order to verify the offeror's computations. Here you will apply the price-related factors that you identified, depending on the type of acquisition. For certain hardware components and software, you may have to apply the provisions of the Buy American Act (see FAR 25.105). For FIP support services, such as on-site maintenance, be alert to any offers that may contain overtime or work shift premiums. Deduct these premiums from the evaluated price, in accordance with the guidance in FAR 22.103. If you find that an offeror's price is obviously inconsistent with the requirements in the RFP, you may have to request a clarification or enter discussions. For example, you may find that the price for an option year of maintenance is underestimated.

Step 4 - Estimate Fair and Reasonable Prices

FAR 15.804

At this point, you are now ready to develop the prenegotiation positions on the prices the Government should pay for the acquisition. Your goal here is to estimate a "fair and reasonable price," based on the offers themselves, the prevailing market prices, regulated prices (such as tariffs for telecommunications), any pricing yardsticks your agency may use, the IGE, and the calculations you will perform. You should NOT conclude that any one price is unreasonable just because it is higher or lower than another offeror's prices.

In order to estimate the "fair and reasonable" price, you may use any of the computational techniques you learned in cost and price analysis, such as index numbers, economic trend analysis, price-volume relationships, improvement curves, cost estimating relationships (CER) or the ratio of price to estimated direct costs. You will probably use a computer spreadsheet program for this purpose. The key is to select the most suitable technique for estimating the fair and reasonable price, based on the particular data available.

(continued on next page)

42.2 Comparing Price Proposals *(continued)*

Step 5 - Account for Significant Differences

Once you have completed your calculations, you should compare them against the offered prices, to determine if there are any significant differences. If there are significant differences between your calculated fair and reasonable prices and the offerors' prices, there may be several reasons:

- *If offerors' prices seem unusually high* - competition may be limited (only a few qualified offerors); there may be collusion among offerors; the specifications may be misleading or defective; or the market conditions may have changed greatly.
- *If offerors' prices seem unusually low* - there may be an advance in technology or efficiency that was not foreseen by the Government during market research; offerors may be trying to "buy in" at intentionally low prices; there may be honest vendor mistakes in the proposal; improper wage rates may have been used; or there may be deficiencies in either the proposal or the specifications.

If offerors' proposals are unusually high or low, you may wish to clarify the reasons later through discussions.

Step 6 - Establish Prenegotiation Positions on Price

FAR 15.609

At this point, you are ready to establish the Government's prenegotiation position on price. You should identify the:

- lowest reasonable price among the offers;
- highest reasonable price among the offers;
- the target price, and
- the competitive range.

Remember to check the guidance in FAR 15.609. If this is a "best value" acquisition, you will not necessarily accept the lowest reasonable offer. Indeed, the offeror with the highest reasonable price may also have the most advantageous technical offer. Remember also that you will exclude from the competitive range any offer that is not susceptible to being made technically acceptable.

(continued on next page)

42.2 Comparing Price Proposals *(continued)*

Step 7 - Make Other Price- Related Preaward Decisions

FAR 15.804

In this step, you will make any other price-related preaward decisions.

For example, you may have determined that so many price offers were unreasonably low (or high), that there must be something wrong with the specifications. In this case, you will probably recommend amending the solicitation or canceling the RFP and resoliciting. You would then contact the technical personnel and request that they review and possibly revise the specifications. You might also determine that there is a need for discussions with those offerors in the competitive range.

If the solicitation provides for award without discussions, you might go ahead and award. For example, in some cases of telecommunications services, the rates may be already established (tariffs) and cannot be further negotiated. You might also decide to forego discussions if there is no reasonable indication that the Government would obtain a net saving by holding discussions.

As you have already learned, FIP resources technology advances very rapidly, and pricing of FIP resources in recent years has been volatile. It may sometimes be advantageous to require *fact-finding* to obtain better or more recent information for price-related factors. If you conclude that the pricing data alone does not provide you enough information upon which to establish a prenegotiation position, you may decide to request cost data (if you do not already have such data). However, you should realize that there are tradeoffs, including further delaying completion of the acquisition.

DoD Acquisitions

DFARS 215.8

In addition, if the FIP resources acquisition will be for a DoD agency, you are also advised to check DFARS 215.8, concerning price negotiation. It provides additional guidance on requests for certified pricing data and limited or partial data from offerors before you prepare the prenegotiation positions.

You are now ready to fully document the results of the process you have just completed.

42.3 Construct a Prenegotiation Memorandum

The Prenegotiation Memorandum

In a FIP resources acquisition, you will need to construct a prenegotiation memorandum, in accordance with the format prescribed by your agency. The prenegotiation memorandum sets forth the Government's negotiation objectives. This memorandum should explain the rationale and factual support for the negotiation objectives to include the:

- pertinent issues to be negotiated (if any);
- cost/price objectives; and
- profit or fee objective.

If you award without discussions or negotiations, you must document the award to support your determinations and findings. If you must conduct discussions and negotiations with offerors in the competitive range, you should construct a prenegotiation memorandum.

The *pertinent issues to be negotiated* will be those that you discovered during the course of your review and analysis of price-related and other factors. At this point, you are simply identifying the issues recommended for negotiation.

The *cost /price objectives* will be those that you determined during your review and analysis of the offerors' proposals.

Of course, the *profit or fee objective* will depend on the type of contract that will be awarded and the risk to be imposed on the contractor. If the award will be for telecommunications services, the profit or fee may be largely influenced by existing tariffs, with little or no room for negotiation. If so, you should also state this fact in the documentation.

The prenegotiation memorandum combines information on pricing with the necessary technical issues.

SUMMARY

In this chapter, you learned to consider all price-related factors unique to FIP resources, accurately calculate evaluated prices, and correctly document your decision. In the next chapter, you will document your award decision based upon your analysis and evaluation of the proposals received.

CHAPTER 43

RECOMMENDATION OF A WINNING FIP PROPOSAL

Chapter Vignette

“So far,” said Mark, “you have told me a great deal about the special considerations in a FIP resources acquisition that make it different from an acquisition for other types of commodities. Is there anything that is different about the actual process of award and performance, such as recommending the final winning proposal?”

“You may remember,” Marcia said, “I told you earlier about the great difficulty the Government has had lately with some of its FIP resource acquisitions. When you are finally ready to make the recommendation about the winning proposal to the SSA, you must make sure that you have done a thorough job of proposal processing, technical evaluation and consideration of the price-related factors. If you have allowed a serious mistake to occur in one or more of these areas, you can almost be certain that there will be protests from the unsuccessful offerors.”

Course Learning Objectives

At the end of this chapter, you will be able to:

Overall:

Given a FIP resources solicitation, proposals, technical data, and any relevant documents, correctly analyze and evaluate the proposals, considering the areas of proposal processing, technical evaluation, and price-related factors.

Individual:

- 43.1 Correctly analyze and evaluate the proposals considering the areas of proposal pricing, technical evaluation and price-related factors.

Chapter Overview

Scope

This chapter explains how, given a FIP resources solicitation, proposals, technical data, and any relevant documents, you can correctly analyze and evaluate the proposals, considering the areas of proposal processing, technical evaluation, and price-related factors.

Topics in This Chapter

This chapter includes the following topics:

SECTION	TITLE	PAGE
43.1	Analyzing and Evaluating Responses to Solicitations	43-4

References

All references should have been addressed in the steps leading to the award decision.

43.1 Analyzing and Evaluating Responses to Solicitations

Overview

This section describes the procedures that you should follow in analyzing and evaluating the responses to a solicitation for a FIP resource acquisition, considering the areas of:

- Proposal pricing;
- Technical evaluation; and
- Price-related factors.

Of course, the procedures that you will follow in evaluating responses for a FIP resource acquisition are very similar to those that you should follow in evaluating responses for any other commodity.

Proposal Pricing

At this point, you have already reviewed the proposal pricing submitted by the various offerors. You have identified any prices that seemed to require clarification or discussion, compared offerors' prices against your own calculations for fair and reasonable prices, identified issues for negotiation, obtained clarification and conducted discussions (if necessary). If there were difficulties in determining the validity of offerors' costs, you may have already required that offerors submit either certified cost or pricing data or partial or limited cost data, and evaluated that data.

Technical Evaluation Report

While you were busy examining the price-related factors and proposal pricing in the acquisition, the technical evaluators were completing their evaluation of technical factors, based on the guidance in the source selection plan. You should have examined the results of the technical evaluation report to determine if the evaluation factors were applied correctly and, if not, returned the report to the technical evaluators for reevaluation.

Price-Related Factors

At this point, you have also reviewed all the pertinent price-related factors and determined what changes, if any, should be made. For example, at this point, you may already have determined whether it was more advantageous to the Government to change the quantities involved in the acquisition, or to select any special options that have been offered.

(continued on next page)

43.1 Analyzing and Evaluating Responses to Solicitations *(continued)*

Final Review

You have already learned in previous chapters about the actions you should take to reach this point in the acquisition process. Assuming there was no reason up to this point to cancel the solicitation, you are finally ready to use the results of all the work that has already been accomplished and to document the recommendation for a winning proposal, based on the results of the offers, the technical evaluation and your own efforts in the review of pricing and price-related factors.

Of course, you will not proceed to complete an award recommendation if there are still any questions or problems to be resolved. Your award recommendation will be reviewed by the contracting officer, the Source Selection Authority, Trail Boss, or other persons with oversight concerning the acquisition, so it should be based on information that is final.

However, before you complete the documentation for the award recommendation, you must ensure that it includes:

- any information concerning irregularities in any of the proposals;
 - any inconsistencies in the terms and conditions;
 - a determination that the source selection strategy was indeed (or was not) followed; and
 - incorporation of pricing information
 - any trade-off analysis
-

Ensure Source Selection Methodology Was Followed

Even at this late stage, you should ensure that the source selection methodology was followed. Even if you have already read the technical evaluation report you may wish to check it again. If you determined that the evaluation criteria were not applied in accordance with the source selection plan, you do not proceed with the award recommendation. To do so is to risk a protest.

(continued on next page)

43.1 Analyzing and Evaluating Responses to Solicitations *(continued)*

Incorporate the
Pricing
Information

You should also be prepared to incorporate the pricing information into the award recommendation, in a manner that makes it easier for a reader to review.

Prepare PNM

At the conclusion of each negotiation, a price negotiation memorandum (PNM) is to be prepared for inclusion in the file and for the use of any reviewing authorities. The PNM has two purposes:

- First, it helps establish the reasonableness of the price agreement reached with the offeror.
- Second, some agencies use the PNM as documental support for the award decision requiring that the PNM or a summary PNM be in sufficient detail to allow an accurate reconstruction of the procurement for immediate review and future reference.

This memorandum should explain the principal elements of the negotiation in sufficient detail to reflect the most significant considerations involved in reaching the final price.

The PNM explains how all the data collected from the proposal and its supporting documents and the Government advisory reports were used. The content in each PNM will vary but must report the actual events of the analysis and negotiation. The availability of data will dictate the kind and amounts of information to include in the PNM. See page 43-10 for the minimum information that should be included.

Ensure That All
Requirements
Were Met

Finally, you may wish to use a checklist to ensure that all requirements were met before making your final recommendation. Many agencies use a checklist, like the one on the following pages, to track the major actions and events leading to the final recommendation.

(continued on next page)

SAMPLE CHECKLIST FOR FINAL REVIEW

Action or Event	Key References	Remarks
1. Request for Contracting Action		
2. Requirements Approval		
3. Acquisition Planning and Market Survey	FAR 7.102,	
4. Brooks Act DPA	FIRMR 201-39.106-2	
5. Warner Amendment DPA	DFARS 239.002	
6. Justification and Approval for Other Than Full & Open Competition	FAR 6.303 & 6.304, DFARS 206.303 & 206.304, FIRMR 201-39.601	
7. Draft RFP		
8. Approval of Organization Conflict of Interest Provisions	FAR 9.506(b)	
9. Independent Government Estimates	FAR 15.803(b)	
10. Funding Documents	FAR 1.602(a),	
11. Service Contract Act Wage Determination	FAR 22.1012 through 22.1014	
12. Source Selection Plan Approval	FAR 15.612(b)(3)	
13. Acquisition Plan Concurrences		
14. Acquisition Plan Approval	FAR 7.103, DFARS 207.103	
15. Synopsis	FAR/DFARS 5.203	
16. Contracting Officer Determination of Actual Synopsis Publication Date		
17. DD 1423 (CDRL)Used for All Technical Data & Software Deliverables	DFARS 227.403-77(b)(2) & 227.405-70	
18. Security Requirements & Required Clauses	FIRMR 201-39.1001, DFARS 239.7102-1	
19. Safeguarding Classified Information	FAR 4.403 & 4.404	

(continued on next page)

SAMPLE CHECKLIST FOR FINAL REVIEW

(continued)

Action or Event	Key References	Remarks
20. Unclassified Information Required Clause	DFARS 201.404-70	
21. SADBUI Approval		
22. Determine Need for Subcontracting Plan	FAR 19.705-2, DFARS 219.705-2	
23. Lists of Classes/Persons Authorized Access to Proprietary & Source Selection Information	FAR 3.104-5(d)(3)-(5), FAR 4.803	
24. Approvals of Time and Materials	FAR 16.601(c)	
25. DSO Determination If Specification Allows for Equipment More Than 8 Yrs. Old & Not Currently in Production	FIRMR 201-39.1003	
26. Justification for the Terms of Any Options	FAR 17.205(a). FAR 1.702(b)	
27. All Options Considered in Award Evaluation	FIRMR 201-39.1701-6, FAR 17.206(b)	
28. Use of Required Factors in Cost Evaluation	FIRMR 201-29.1501	
29. Privacy Act Review	FAR 24.103	
30. Lease/Purchase Rationale	DFARS 207.401(a),	
31. Approval of Leasing		
32. Justification for Acquiring Only New Equipment	FAR 10.010, FIRMR Bulletin C-29	
33. Approval of Cost Reimbursement D&F (for all types of cost contracts)	FAR 16.301-c(c), DFARS 216.301-3,	
34. Determination for Use of Fixed Price for Development Contract	DFARS 235.006,	
35. Approval of Use of VE Clause	FAR 43.201(a)(5)	

(continued on next page)

SAMPLE CHECKLIST FOR FINAL REVIEW

(continued)

Action or Event	Key References	Remarks
36. SSA Approval of RFP		
37. Nonpersonal Services	FAR 37.103	
38. No Inherently Governmental Functions	OMB Policy Letter 92-1	
39. Determination to Restrict Use of Incorporation by Reference	FAR 52.102-2(a)(6)	
40. Documentation Justifying Contract Type	FAR 16.103(d)	
41. Competitive Proposal Decision	FAR 6.401	
42. Justification for Non-FOB Destination Delivery Terms	FAR 47.302(b)	
43. Determination For Use Of Special Contract Requirements & Provisions If "Commercial Items" Are Being Acquired	DFARS 211.7004-1(a)(2) and (h)(2)(ii)	
44. Non-Use of Repetitive Set-Asides	FAR 19.501(g), DFARS 219.501	
45. Submission of SF 98	FAR 22.1008-7	
46. Approval of Progress Payments	FAR 32.501-2, DFARS 232.501-2, FAR 32.502-2	
47. Approval of Warranties	FAR 46.704, DFARS 246.704	
48. Past Performance As An Evaluation Factor	OFPP Policy Letter 92-5	

43.1 Analyzing and Evaluating Responses to Solicitations *(continued)*

Documentation

The specific format that you will use to develop and document recommendations may vary from one agency to another. However, the basic information that is contained in a PNM is shown in the table below.

CONTENTS OF PRICE NEGOTIATION MEMORANDUM	
	<ul style="list-style-type: none"> • Purpose of the negotiation • Description of the acquisition, including appropriate identifying numbers (e.g., RFP No.) • Name, position, and organization of each person representing the offeror and the Government in the negotiation. • Current status of offeror's: purchasing system, when material is a significant cost element, and other systems (e.g., estimating, accounting, and compensation). • If certified cost and pricing data were required, the extent to which the contracting officer: <ul style="list-style-type: none"> – Relied on the data submitted and used them in negotiating the price – Recognized as inaccurate, incomplete, or noncurrent; resulting actions by the contracting officer and offeror; effect of the defective data on the price negotiated. • For price negotiations over \$100,000, any exemption or waiver to requiring cost or pricing data and the basis for claiming or granting it. • For price negotiations under \$100,000, the rationale for requiring cost or pricing data, if such had been required. • Summary of offeror's proposal, recommendations from field pricing report, and reasons for any pertinent variances from such recommendations. Where the determination of price reasonableness was based on cost analysis, include for each major cost element: <ul style="list-style-type: none"> – Contractor's proposal – Field report's recommendation (if any) – Government's negotiation objective – Amount considered negotiated as part of the price • The most significant facts or considerations controlling the establishment of the prenegotiation price objective and the negotiated price, including the rationale for any differences between the two. • If significant, the impact of direction from Congress, other agencies, and higher officials. • Basis for determining profit or fee prenegotiation objective; and profit or fee negotiated.

SUMMARY

In this chapter, you learned to correctly analyze and evaluate solicitations considering the areas of proposal processing, technical evaluation, and price-related factors and to document a winning proposal. In the next chapter, you will learn to apply and analyze GSBCA protest procedures.

CHAPTER 44

PROTEST ISSUES IN FIP RESOURCES ACQUISITIONS

Chapter Vignette

“Do you realize,” asked Mark, “that you have now mentioned several times the strong possibility of a protest action following the announcement of the winning proposal in a FIP resources acquisition. Is there something especially scary here that I should know about?”

“I certainly don’t mean to scare you,” said Marcia, “but the fact is that some very recent acquisitions for FIP resources have not gone well. When there is a lot of money at stake and the competition is so fierce, you must understand that losing a very big procurement action can really set the losing firms back for a year or two. So you can be sure that some of the offerors are not going to stand idly by and let the Government get away with what the offerors perceive as irregularities in the acquisition process. Remember, we are talking about millions of dollars in sales and, also, of dozens or hundreds of jobs. You must understand the various options available to a protesting offeror and the protest procedures employed by the GAO and the GSBCA. You should also know some of the key precedents and decisions that continue to influence protests today.”

Course Learning Objectives

At the end of this chapter, you will be able to:

Overall:

Apply and analyze protest procedures.

Individual:

- 44.1 Identify the various options for a FIP protestor involving FIP resources.
- 44.2 Differentiate between the General Accounting Office (GAO) protest procedures and other protest procedures.
- 44.3 Identify key precedents and decisions of the GSBICA.

Chapter Overview

Scope

This chapter explains how to apply and analyze protest procedures. It identifies the various options available to a dissatisfied interested party in a FIP resources acquisition. These options include a protest to the CO, protest to the agency, protest to the GAO or GSBCA, or by filing suit in the appropriate court. It also differentiates between the GAO protest procedures and the other protest procedures.

Definition of a Protest

A protest is a ***“written objection by an interested party to a solicitation, a proposed award, or an award of a contract.”***

Note that, under this definition, a protest can occur at almost any time during either the solicitation and award phase or after award.

Definition of an Interested Party

FAR 33.101

An interested party for the purpose of filing a protest, as defined in FAR 33.101, is an actual or prospective offeror whose direct economic interest would be affected by the award of a contract or by the failure to award a contract.

Avoiding Protests

Of course, it is almost always better to avoid a protest by an offeror or contractor. Much time, money and energy is expended by the Government in dealing with protests, so you should be sensitive to the need to minimize protests. In many cases, a vendor will protest because of some Government action or deficiency that should have been foreseen.

For example, many protests are filed over the Government’s failure to provide sufficient information to offerors, failure to follow Government regulations and procedures, or failure to plan the acquisition in a thorough manner. FIRMR Circular C-26 (Vendor complaints and agency protests) provides information on reducing vendor complaints and agency protests.

However, even if the Government does everything correctly, there is always the possibility of a protest. In fact, there is some indication that some offerors protest in order to recoup at least their costs of preparing a proposal, with little chance of winning.

Chapter Overview *(continued)*

Topics in This Chapter

SECTION	TITLE	PAGE
44.1	Options Available to the Protestor	44-5
44.2	Protest to the Agency	44-8
44.3	Protest to the GSBCA	44-9
44.4	Key Precedents and Decisions of the GSBCA	44-14
44.5	Protest to the GAO	44-15

References

In order to understand the procedures in this chapter, you will need access to the following references:

- The Competition in Contracting Act
- The Contract Disputes Act of 1978 (41 U.S.C. 601-613)
- FAR Part 33
- FIRMR 201-39.33
- DFARS 233.104
- FIRMR Bulletin C-26 (Vendor complaints and agency protests)
- the ADP Protest Report (published by GSA). Note that you can obtain a subscription free of charge by writing to:

ADP Protest Report
GSA-Acquisition Evaluation and Analysis Branch (KMAD)
Room 5116
18th and F Streets, NW
Washington, DC 20405

44.1 Options Available to the Protestor

Options Available to the Protestor

This section explains the options available to the protestor. The initiative in a protest action lies with the protestor, not the Government. That is, the action begins when an offeror or bidder submits a formal, written objection to a specification or proposed or final award by the Government.

When Protests Are Filed

An offeror may choose to file a protest on any one of three different occasions in a FIP resources acquisition. For instance:

1. *Before offers are due.* An interested party may protest anytime they believe the Government has unduly restricted the requirement. An interested party may submit a protest at this time because the party thinks that the specifications are unfair, or “wired” to produce an award to a favored competitor.

For example, a specification that requires a certain proprietary computer operating system or software controlled by one offeror may be protested. The Government should have justified any restriction within the solicitation, e.g., if a particular operating system or software was specified.

2. *After offers are received, but before award.*

For example, an interested party may protest elimination from consideration as being “non-responsive,” or during the determination of the competitive range in the source selection process.

3. *After the award is announced.*

For example, an interested party may protest the award to a competitor as “unfair,” based on the evaluation factors.

NOTE: Normally there is a 10 working-days period for filing a *timely* protest.

44.1 Options Available to the Protestor *(continued)*

Protestor's Four Options

FAR Part 33
FIRMR 201-39.33

Regardless of *when* the protest is filed, the protestor has four basic options concerning the complaint. The Competition in Contracting Act (CICA) provides information for offerors who wish to protest an acquisition. You are probably already familiar with these procedures as stated in FAR Part 33. However, FIRMR 201-39.33 (Protests, Disputes and Appeals) governs protests of FIP resources awards made to the General Services Board of Contract Appeals. The four options available to the protestor under the FAR are:

1. Protest to the Agency. The simplest option for the protestor is to submit a protest to the agency's contracting officer. **Note that the Government encourages protestors to first attempt to resolve a protest within the agency.** In many cases, timely action by the contracting office on a protest will prevent further protest action.
2. Protest to ***EITHER*** the General Services Board of Contract Appeals (GSBCA), ***OR***
3. Protest to the General Accounting Office (GAO), ***AND/OR***
4. File a suit in the U.S. Claims Court.

Disputes vs. Protests

FAR 33.2

However, you should not confuse a contract dispute with a protest.

FAR Subpart 33.2 discusses contract disputes and appeals. A dispute is a disagreement that arises with respect to contracting officer decisions on matters "arising under" or "relating to" a contract. A contract administration phase.

FAR 33.101

A **protest** is defined by FAR 33.101 as "a written objection by an interested party to a solicitation by an agency for offers for a proposed contract for the acquisition of supplies or services or a written objection by an interested party to a proposed award or the award of such a contract."

44.2 Protest to the Agency

Protest to the Agency

The first option for an interested party is to file a protest with the contracting office that issues the solicitation. *Remember that the Government encourages resolving protests within the agency before trying the GSBICA or GAO options.*

However, you should note that whether or not a protest is resolved at the agency level, *the protestor may also file a protest at either the GSBICA or the GAO, but not both.*

Actions When A Protest is Filed With the Agency

If...	Then..
a protestor files a protest before award	<p>you usually should not make the award until you have resolved the protest. The only exception would be a case where the supply or service is urgently required, such as in an emergency.</p> <p>For example, if supplies such as health and safety items are urgently required for worker safety, you would probably go ahead with the award despite the nature of any protest.</p>
you determine to go ahead with an award	<p>you should notify the eligible offerors that there has been a protest and request that they extend the period of acceptance for their offers, in order to preclude the need for resolicitation.</p> <p>Handle the protest in accordance with your agency's procedures.</p>
another offeror protests after a contract has already been let	do NOT terminate the contract or suspend the contract performance just because another offeror is protesting unless there are indications that the contract will be invalidated.
the contractor protests or disputes the terms or conditions of the contract after award	you may attempt to work out an agreement with the contractor or suspend work on the contract at no added cost to the Government.

44.3 Protest to the GSBCA

Protest to the GSBCA

The second option for a protestor is to file with the General Services Board of Contract Appeals (GSBCA). The GSBCA has established protest procedures. Remember, the protestor can file a protest either directly, or after failure to resolve a protest at the agency level. However, if a protest is filed at the GSBCA, it cannot also be filed later at the GAO.

Background

Since GSBCA obtained jurisdiction over FIP resources protests in 1985, there have been nearly 2,000 protests concerning FIP resources awards. Fortunately, in most cases (about 80%), the Government was able to prove it had followed correct procedures in the award and administration of the procurement.

However, in nearly twenty percent of the cases, the contractor recovered some or all of the protest costs which it could substantiate. This represented an additional cost to the Government, not only in money, but in the time spent defending against the protest. Even in the majority of cases when the Government was successful, there was a cost in time and money involved. It is clearly far better to avoid protests whenever possible by following effective procedures to minimize the chance of successful protest.

Sequence of Events

A protest action to the GSBCA begins when the protestor provides a copy of the protest to the GSBCA. At the same time, the protestor must also provide a copy of the protest to the agency.

The protest must contain a request for a hearing on the protested action, such as a suspension of the acquisition, or a complaint about the terms, conditions or specifications in the solicitation.

The following events then occur in sequence:

1. Within one working day, you, as the Contracting Officer or Contract Specialist, must notify all sources who were solicited. If the solicitation has already closed, you must notify all offerors. You can do this either orally or in writing. Also, within one working day of receiving a copy of the protest, notify:

GSA's Acquisition Reviews Division (KAA)
18th and F Streets, NW
Washington, DC 20405

You can do this also by telephone: (202) 501-1566

(Events continued on next page)

44.3 Protest to the GSBCA *(continued)*

Sequence of Events (continued)

2. Within five working days, you must inform, orally or in writing the GSBCA that you have notified all parties.
3. Within 10 working days after the protest is received, you must forward to the GSBCA a protest file (a so-called “Rule 4 file”) which includes the following information from your files:
 - Any information on the contracting officer’s decision which led to the protest (such as the award decision)
 - The contract (if one was already awarded) to include all the terms and conditions, modifications, specifications, plans, and any illustrations, such as engineering drawings
 - All correspondence, such as memos, letters or records or transcripts of any discussions with the offeror(s), which may be relevant to the protest
 - Any statements or any affidavits which concern the solicitation or protest
 - Copies of the solicitation and any sealed bids which were opened or any offers which were received
 - Finally, a list of all the documents which you submitted to the GSBCA.
4. Within a period of 15 days after the protest is filed, or at a time established by the GSBCA, you must then be prepared to submit your agency’s defense in support of the acquisition decisions.

The GSBCA’s goal is to resolve the protest quickly, so you can expect that it may schedule a hearing as early as 10-15 days after the protest is filed.

Preparing the Defense

Therefore, you have a MAXIMUM period of about 15 days during the period of time from the arrival of the protest to prepare to defend your acquisition decisions.

Make sure that you have a complete “audit trail” of documentation which shows all the recommendations and decisions which led to the award decision, or the recommendation to the SSA for award to a particular offeror. (See Chapter 40, “Processing Proposals for FIP Resources”, and Chapter 41, “Technical Evaluation of FIP Resources”).

(continued on next page)

44.3 Protest to the GSBCA *(continued)*

Examples of Documents to Review

Of course, you should thoroughly review all the documents that were generated during the acquisition and award phase, especially those documents that establish the reasons for the source selection and award. This includes reviewing the key documents which you may also have to provide to the GSBCA or the GAO, such as the:

- Acquisition Plan;
- Source Selection Plan;
- Memoranda or guidance from the Source Selection Authority;
- Instructions to the evaluators or Source Selection Board;
- Notes, memos, or reports prepared by the evaluators, such as requests for information; and
- Copies of any memos or decision briefing notes on the recommended source selection given to the SSA.

Actually, if the protest concerns a timely request that the procurement authority be suspended, the GSBCA may schedule the hearing as early as 10 days after protest. Usually, the GSBCA will suspend the procurement authority during a protest, except in cases of urgent national interest.

DO NOT WAIT UNTIL THE LAST MINUTE TO PREPARE THE DEFENSE. You can be sure that the protestor(s) will be well prepared to attack any decisions you or other Government personnel made, so you must be thoroughly prepared to defend those decisions.

GSBCA Hearing on the Merits

If the protestor(s) request a hearing on the merits of the protest, the GSBCA will usually decide to hold a hearing within 25 days after the protest is filed.

GSBCA Decision

Usually, the GSBCA will announce a decision on the protest within 45 days after the protest is filed. However, in some cases, including some complex FIP resources protests, the GSBCA has determined that more time was needed.

(continued on next page)

44.3 Protest to the GSBCA *(continued)*

Protestor's Appeal of GSBCA Decision

It may happen that the protestor will disagree with the GSBCA decision. If this occurs, the protestor may then file an appeal to the United States Court of Appeals for the Federal Circuit. for a final decision. Remember, a protestor cannot file a protest with both the GSBCA and the GAO.

An appeal to the court is a legal, rather than an administrative, appeal and occurs in only a relatively small number of cases. However, if the protestor does decide to exercise this right of appeal, it can have the effect of greatly slowing a planned FIP resources acquisition. Often, the appeal can slow the acquisition for an entire year.

Summary of GSBCA Protest Events

The following timeline summarizes the events when a protest is filed with the GSBCA.

Working Days	Events
0	Protestor files a protest and provides a copy to the agency
1	You notify all sources who were solicited and the GSA
5	You notify the GSBCA that you have notified all parties
10	You forward to the GSBCA a protest file (Rule 4 file)
15	The GSBCA schedules a hearing at which time you must have an agency defense against the protest
25	The GSBCA holds a hearing
45	The GSBCA announces a decision

(continued on next page)

44.3 Protest to the GSBCA *(continued)*

Disposition of Protests to GSBCA

For those protests made to the GSBCA, the cases may eventually be disposed of in several ways:

- withdrawn by the protestor (about 34% of the time);
 - settled by negotiation (about 28% of the time);
 - granted (about 15% of the time);
 - denied outright (about 13% of the time) or
 - dismissed (about 11% of the time).
-

Section Summary

Three main areas of concern to the contract specialist are:

- inadequate specification
 - improper evaluation criteria
 - failure to follow the established evaluation methodology in the source selection process
-

44.4 Key Precedents and Decisions of the GSBCA

Background	<p>This section discusses some key precedents and decisions made by the GSBCA concerning protests filed over FIP resources awards. This information is intended to help you obtain an understanding of the types and nature of protests and the most likely outcomes, based on the nature of the protests. Remember, you can obtain updated information on GSBCA decisions by subscribing (free of charge) to the ADP Protest Report.</p>
Areas of Protest	<p>Protests following FIP resources acquisitions are often made for the same reasons as awards for other supplies and services. However, according to the ADP Protest Report, there do seem to be certain areas or issues where protests are more common than others. For example:</p> <ul style="list-style-type: none"> • Charges of “<i>improper evaluation</i>” by the Government during the solicitation and award phase, such as the evaluators ignoring or improperly applying evaluation factors, or applying evaluation factors that were not in the solicitation; • Charges of “<i>restriction of competition</i>,” such as issuing specifications and standards that were unnecessarily restrictive, or appeared to favor one offeror, such as a certain software or operating system; and • Charges of “<i>improper tradeoffs</i>” such as a protest that a “best value” evaluation was improper.
Examples of Decisions	<p>The following is a partial sampling of some key precedents and decisions made by the GSBCA. This is to give you an overview of some of the current issues and the content of some recent decision.</p>
Improper Evaluation	<p><i>Advanced Data Concepts, Inc. v. Department of Energy</i>, GSBCA No. 11707-P. The protest concerned an evaluation requiring identification of “Key Personnel” in the proposal. The awardee did not specifically identify the key personnel required, nor their specific costs. The GSBCA granted the protest because the DOE could not have properly evaluated the Key Personnel nor their labor costs without knowing who they were.</p>

(continued on next page)

44.4 Key Precedents and Decisions of the GSBCA *(continued)*

Restriction of Competition	<i>RMTC Systems, Inc. v. Nuclear Regulatory Commission</i> , GSBCA No. 11734-P. The protest charged that the “brand name or equal” invitation for bid on modems, network control software, and modem management systems shut out all offerors except one brand name vendor. The GSBCA agreed in part and directed the agency to perform a “more thorough market survey...”
Improper Tradeoffs	<i>CompuAdd Corporation, Apple Computer, and International Data Products Corporation v. Department of the Air Force</i> , GSBCA No. 12333. The protest charged, among other things, that the Air Force had conducted a flawed “best value” analysis during evaluation of offers, in that it used an improper method for evaluating best value and conducting the tradeoffs. The GSBCA disagreed and denied the protest, stating that the regulations gave the Government considerable discretion in conducting a tradeoff analysis for best value.

44.5 Protest to the GAO

Protest to the GAO

The third common option for a protestor is to submit a protest to the General Accounting Office (GAO). For protest actions concerning DoD acquisitions, you should check DFARS 233.104.

Sequence of Events

The sequence of events for a GAO protest also begins with the filing of a protest. At the same time, the protestor must also provide a copy of the protest to the agency.

The protestor may request that you provide any documents which are related to the acquisition. *As long as these documents are releasable, you must then provide them.* If, for some reason, you believe that these documents cannot be released, you must justify the reasons for not releasing the documents to GAO.

You must also provide to the GAO a report which includes the solicitation or contract events, decisions, actions, and recommendations, and the names of any other parties who will receive the report. You must do this within 25 days of the protest.

The GAO will then schedule and conduct a fact-finding conference. Usually, within 90 working days (or 45 calendar days under the “express option”) the GAO will announce a **recommendation**. In some cases, the GAO may decide that more time is needed.

In most cases, the agency will accept the GAO recommendation to resolve the protest. However, it is possible that the agency will not accept the protest. When this happens, the head of your agency (or another designated person) must report to the Comptroller General within 60 days of the recommendation why your agency has decided not to accept or comply with the GAO recommendation.

Filing a Suit in Court

Remember, if the GAO recommendation is against the protest, the protestor may still submit a legal appeal to the United States Court of Appeals for the Federal Circuit. That is the fourth and final option.

SUMMARY

In this chapter, you learned to apply and analyze GSBCA protest procedures. In the next chapter, you will learn to apply and analyze contract monitoring procedures for FIP resources.

CHAPTER 45

FIP POST-AWARD CONSIDERATIONS

Chapter Vignette

“What about the contract monitoring procedures for a FIP resources acquisition, “ asked Mark. “I mean, suppose that everything else in the evaluation and selection processes goes well and even if there are no protests, is there anything different about the long term procedures for monitoring the contract that I should know about?”

“Yes, of course,” replied Marcia. “To be sure, there are again many similarities in the contract monitoring procedures for a FIP resources contract and for any other type of commodity, but there are a few differences, too. One key area is in contract modifications. You will recall that technology insertion and infusion can play a big role in a rapidly advancing field such as this one, and you must be prepared for it.”

Course Learning Objectives

At the end of this chapter, you will be able to:

Overall:

Apply and analyze contract monitoring procedures for FIP resources.

Individual:

- 45.1 Explain contract monitoring procedures unique to FIP resources.
- 45.2 Explain delegation of contract administration functions.
- 45.3 Generalize and contrast performance monitoring unique to FIP resources contracting, to other commodity contracting.
- 45.4 Give examples of unique requirements for FIP resources contract modifications.

Chapter Overview

Scope	<p>This chapter presents postaward considerations, including how to apply and analyze contract monitoring procedures for FIP resources during the contract administration phase. It explains contract monitoring procedures unique to FIP resources and delegation of contract administration functions. It also generalizes and contrasts performance monitoring unique to FIP resources contracting, compared to other commodity contracting.</p> <p>Finally, it provides examples of unique requirements for FIP resources contract modifications.</p>
Focus on the Role of the Contract Specialist	<p>The focus of this chapter is on the considerations that will be required of you, the contract specialist, or Contracting Officer, during the post-award period (contract administration phase) of a FIP resources acquisition.</p>
Requirement for Coordination with the COTR	<p>As in any post-award activity, a FIP resources acquisition will require that you coordinate closely with the Contracting Officer's Technical Representative (COTR). This close coordination is essential in a FIP resources acquisition in order for you to understand whether the acquired FIP resource is performing in accordance with the stated terms and conditions of the contract and meeting all the contract requirements.</p> <p>You will recall that the COTR is the key technical representative of the Contracting Officer (CO), and is uniquely qualified to monitor technical performance, foresee difficulties, and propose solutions to technical problems which may require contractual actions, such as modifications, by you.</p> <p><i>If you fail to coordinate and communicate effectively with the COTR, there is an increased danger that the Government may fail to enforce certain rights and meet certain obligations.</i></p> <p>For example, if a contractor fails to meet a computer performance requirement, you must find this out, or else you may fail to protect the Government's interest and demand compliance by the contractor. On the other hand, if you do not learn that the Government has failed to provide Government-furnished equipment on time, you may be unable to protect against a claim by the contractor.</p>

(continued on next page)

Chapter Overview

References

In order to perform the procedures discussed in this chapter, you would normally have access to the following key references and documents:

- The contract awarded to the successful offeror.
 - The Letter of Designation from the CO to the COTR.
 - Any proposed modifications or changed requirements from a requiring agency, including recommendations from the COTR.
 - GSA publication, “*A Guide for Contracting Officers’ Technical Representatives.*”
-

Topics in This Chapter

This chapter contains the following topics:

SECTION	TITLE	PAGE
45.1	Contract Monitoring Procedures for FIP Resources	45-5
45.2	Contract Monitoring Procedures Unique to FIP Resources	45-12
45.3	Performance Monitoring for Telecommunications	45-15
45.4	Unique Requirements for FIP Resource Contract Modifications	45-18

45.1 Contract Monitoring Procedures for FIP Resources

Contract Monitoring Procedures

As you already know, in any contract, it is necessary to monitor the contractor's performance in order to make sure that the supplies or services are provided according to the terms and conditions of the contract.

In many ways, the monitoring procedures used in FIP resources contracts are similar or identical to the monitoring procedures used in any other contract action. These similarities include the use of qualified technical assistance, such as COTRs, use of periodic reports, and procedures which are clear and have been explained to the contractor.

Explanation of Contract Monitoring Procedures

Normally, the explanation of contract monitoring procedures will be made to the contractor(s) in great detail right at the start of the project, very soon after contract award. These instructions will usually be made in a formal (written) format by the CO and will explain all the monitoring procedures to be used during the contract administration phase, during the so-called *post-award conference*. This will normally include a review of the types and formats of the reports expected from the contractor, such as monthly summaries or progress reports specified by the contracts.

In addition to the written instructions, the CO will probably choose to have the COTR present to answer any technical questions. In this regard, the explanation of monitoring procedures for a FIP resources contract is much like that for any complex acquisition.

However, you will see in a later section of this chapter that there are some contract monitoring procedures that are unique, or nearly unique, to FIP resources contracts.

(continued on next page)

45.1 Contract Monitoring Procedures for FIP Resources *(continued)*

COTR

The first major similarity concerns use of qualified technical assistance, such as a Contracting Officer's Technical Representative (COTR), to monitor the technical aspects of the contract and report to you any failure by the contractor to meet the terms and conditions of the contract. In a complex FIP resources contract, you might even have several COTRs, for specialized areas as hardware, software, overall system integration, and training.

Often, the COTR(s) will be technically-qualified persons from the agency program office, who probably helped prepare the acquisition plan and may have served as technical evaluators during source selection. They should be qualified to evaluate technical performance, but not necessarily contractual performance. For example, they should be able to tell you whether the technical specifications are being met by the contractor.

Letter of Designation

The CO will assign specific responsibilities and authority for a FIP resources acquisition to the COTR(s) in a document called the *Letter of Designation*. An example of this letter is on the following page.

(Topic continued on next page)

45.1 Contract Monitoring Procedures for FIP Resources *(continued)*

Example of Letter
of Designation for
COTR

Agency Letterhead

TO: Jonathan Livingston, Jr.
FROM: Marcia Davis, Contracting Officer
SUBJECT: Delegation of Contracting Officer's Technical Representative

RE: Contract Number 1234567890

This is to inform you that you are hereby appointed to be the Contracting Officer's Technical Representative (COTR) for the purpose of monitoring the contractor's performance on the referenced contract.

You are hereby authorized to oversee the contractor's technical efforts to assure that such efforts conform to the terms and conditions of the referenced contract. You will be the primary point of contact between the contractor and the Contracting Officer on all matters concerning the contractor's technical efforts.

This delegation of authority does not authorize you to direct the contractor to perform any work which is not specifically stated in the contract. Also, this delegation of authority does not authorize you to take any other actions which are not specifically stated in the enclosures or attachments to this letter of delegation.

You are advised that you may incur pecuniary liability for any act on your part which is not within the scope of this delegation of authority.

You are also advised that you may not further delegate any authority. This delegation of authority is effective immediately and shall expire upon completion of the contract, unless otherwise rescinded earlier in writing by the undersigned or a successor Contracting Officer.

By signing, dating, and returning this letter to the undersigned Contracting Officer, you will acknowledge that you understand and accept the terms of this delegation and the instruction specified in the attachments.

Marcia Davis
(Contracting Officer)

March 30, 199X
(Date)

I have read and understand this delegation of authority and all attachments and I accept the delegation.

Jonathan Livingston, Jr.

April 15, 199X

45.1 Contract Monitoring Procedures for FIP Resources *(continued)*

Instructions to the Contractor

You are responsible to instruct the contractor that he/she will respond to *technical directions* from the COTR(s), but will accept *contractual directions* only from the Contracting Officer, and that these contractual directions must be in writing, since they may alter the terms of performance, deliverables, period of performance or price(s). These instructions are in writing and are usually emphasized at the post-award conference.

Instructions to the COTR(s)

Also, in any contract action, you are responsible to instruct the COTR(s) of their responsibility to provide only technical directions (not contractual directions) to the contractor, and to report the progress and any problems to you, along with any recommendations. You may also advise the contractor in writing of the COTR's duties and maintain this information in the contract correspondence file.

The duties assigned to the COTR may include some or all of those in the following table. (Note that this is NOT a comprehensive list of all such duties; it is merely representative.)

Typical Monitoring Duties Assigned To The COTR In A FIP Resource Acquisition
<ul style="list-style-type: none"> • Reviewing contractor's compensation structure, insurance plans, and technical proposals; • Conducting post-award technical orientations and briefings; • Monitoring cost performance and recommending payment of contractor invoices, including labor hours, overtime, travel, and deliverables; • Preparing fact finding reports; • Drafting contract documents for contract modification and termination; • Performing property administration functions, including acquisition and disposal of contractor inventory; • Monitoring contractor performance to ensure compliance with quality assurance and contractual terms for schedule, cost and technical performance (<i>including acceptance testing</i>); • Monitoring user performance to determine if more training is required from the contractor(s); • Reviewing technical content of proposed changes; • Evaluating subcontractor plans and performance; and • Maintaining contract records.

(continued on next page)

45.1 Contract Monitoring Procedures for FIP Resources *(continued)*

Importance of Acceptance Testing

You can see that monitoring of *acceptance testing* is one of the typical duties or tasks that you might assign to the COTR(s) in the post-award phase of a FIP resources acquisition. Acceptance testing is particularly important to FIP resources acquisition and is a key tool for determining final acceptance of an offeror's technical capability.

Contract Monitoring Plan

The types of monitoring duties that the CO will typically assign and emphasize to the COTR in a FIP resources acquisition will depend on the terms and conditions of the acquisition. If the FIP resources acquisition is complex, the CO may even require the COTR to develop a *Contract Monitoring Plan*. This plan will explain how the Government intends to monitor the contractor's performance. In some cases, effective contract monitoring is not possible without such a plan.

For example, a large computer network installed by a contractor may be used by many Government employees at many different sites. It might be physically impossible for the COTR to visit all sites and determine contractor performance for all users. In this case, the plan might require that a number of key individuals submit frequent telephone or written reports to the COTR on contractor performance. This would usually include any information on system breakdowns and "*downtime*," when the system is not available. In fact, information on downtime can be crucial for supporting Government claims of nonperformance by the contractor.

Also, the COTR must learn as soon as possible of any disputes with the contractor's personnel or of any difficulties experienced by the Government users.

The point here is that the monitoring plan will include details on WHO will obtain WHAT information and HOW, WHEN and WHERE that information will be provided.

(continued on next page)

45.1 Contract Monitoring Procedures for FIP Resources *(continued)*

Use of Reports

In addition to reports from the COTR, you may also rely heavily on the reports submitted by the contractor to provide you the necessary information you need to make contractual decisions.

Of course, you can require the contractor to submit detailed periodic reports (usually weekly or monthly) in a specified format to document actions such as the amount and types of work done during the reporting period, compliance with the work schedule and any problem areas. These contract reports will normally be reviewed by the COTR

DOD Contract Reporting

In the case of DOD acquisitions, for example, you would still use the uniform reporting requirements specified for the Defense Contract Action Data System (DCADS) as specified in DFARS Subpart 204.6 (Contract Reporting).

The format and content of the reports that you require will depend on the types of information that you need, but at the very least, you will probably require notification that milestones have been met and deliverables have been sent during the past reporting period. In addition, you may also require such information on problem areas and the anticipated work or deliverables during the next reporting period.

An example of such a periodic report for a FIP resources acquisition project is on the following page. (Note that the exact format may differ among agencies.)

(continued on next page)

45.1 Contract Monitoring Procedures for FIP Resources (continued)

Example of
Periodic Report

MONTHLY SUMMARY REPORT NO. 11
CONTRACT NO. 1234567890
Installation of Centaur Computer System

1. Period Covered: January 1, 199X to January 31, 199X.

2. Deliverables During This Period. In accordance with the master delivery schedule, components of the Centaur Computer System (CCS) were installed at the designated Government facilities in New Orleans during the period of 3-12 January 199X. This was the third of seven scheduled CCS sites to be completed and we are presently on schedule with installation. The training sessions began on schedule in New Orleans on January 13, for system administrators and key personnel. Operator training began on schedule on January 21.

3. Charges to Date: As of January 31, it is estimated that a total of \$1,777,000 have been charged for labor, \$27,000 for travel and \$11,764,000 for materials. This rate of expenditure is within the projected rates. Exact charges will be forwarded in the monthly invoice.

4. Problem Areas: Only 94 of the scheduled 176 Government operators attended the operator training at New Orleans in January. This was the only scheduled operator training session required by contract at that site. This training is critical to success of the system. Therefore, Centaur Corporation will forward a proposal for a modification to the contract to add an additional operator's class. This information was provided with a list of attendees to the COTR, Mr. Michael Sparks.

5. Projected Workload: During the next reporting period (February, 199X) it is anticipated that all files will be converted at the New Orleans site and parallel operation will begin, with full conversion to the Centaur system now scheduled for April 1, 199X.

Henry Pomfritte

Program Manager
Centaur Federal Systems Division

45.2 Contract Monitoring Procedures Unique to FIP Resources

Monitoring Procedures Unique to FIP Resources

However, there are monitoring procedures which are unique to a FIP resources acquisition. These include *monitoring for liquidated damages* (for FIP support services), *maintenance downtime credits* (for maintenance contracts), *validation/compatibility* demonstrations (especially for software) and *quality assurance (QA) deduction schedules* (especially for clerical or technical support services).

Liquidated Damages Clause

One problem which may arise in some large scale FIP resources contracts is liquidated damages, so some FIP support service contracts contain a *liquidated damages clause* and *formulas* to compute the liquidated damages. Maintenance downtime credit is computed in accordance with the formula designated in the contract.

Maintenance Downtime

Another monitoring procedure which is rather unique to FIP resources contract actions concerns maintenance downtime credits. *Maintenance downtime credits are prorations or reductions in monthly maintenance charges when equipment is inoperable.*

Relation to Availability

For example, suppose that a contract specifies that the contractor must furnish maintenance that a computer system for payrolls will not be out of service for more than 24 consecutive hours. If the computer system is “down” (unavailable for service) for more than 24 hours for maintenance, the Government may claim maintenance downtime credits. Again, you would rely heavily on the COTR to document the computer down time in order to obtain maintenance downtime credits.

Of course, you could not obtain maintenance credits if the computer was down due to causes external to the machine (e.g. electrical power outages), or through fault or negligence of the Government or for reasons other than those stated in the contract.

(continued on next page)

45.2 Contract Monitoring Procedures Unique to FIP Resources

(continued)

Monitoring for Downtime

Again, the key to this monitoring procedure is accurate and timely reporting of downtime by the COTR. This will require the COTR to coordinate closely with users of FIP resources and track and document the availability of the FIP resource(s).

Capability/ Validation Demonstrations for Software

In the case of software, a unique monitoring procedure concerns a requirement to monitor validation and capability demonstrations for software. Software is often crucial to the success of a FIP resources acquisition. The offeror(s) may make certain assertions about the effectiveness or compatibility of the software in documents such as the validation plan, the conversion plan, or the acceptance test plan. The Government will usually test these assertions in tests designed for this purpose.

A key part of some acceptance tests for FIP resources is the capability and validation demonstration for software. The COTR and other Government technical experts will review the contractor's validation plan and may also write a Government acceptance plan. However, the contractor's claims cannot be validated without a software validation or demonstration to prove that the software works as claimed and is compatible with older software and the hardware.

Usually, the COTR(s) will schedule a demonstration or acceptance test for the contractor's software. Unless the contractor's software meets specifications in a demonstration or acceptance test, the Government may refuse to accept the software.

You can see that it is essential for the COTR to be technically qualified, to coordinate closely with other technical experts and to monitor and document the software performance thoroughly to be sure it meets specifications.

Quality Assurance Deduction Schedules

Another contract monitoring procedure which is almost unique to a FIP resources acquisition is the use of *quality assurance (QA) deduction schedules*. You may decide to use QA deduction schedules in those FIP resources contracts where there is a requirement for technical support or clerical support. *QA deduction schedules are tables or plans of expected output*, which are agreed to by the contractor as part of the contract agreement.

(Topic continued on next page)

45.2 Contract Monitoring Procedures Unique to FIP Resources

(continued)

Quality Assurance
Deduction
Schedules
(continued)

These QA deduction schedules are based on measuring actual output against a standard for expected output. Then, if the contractor fails to meet the standard, the Government may deduct some percentage of payment, based on the unsatisfactory performance.

For example, if you had a contract for data entry using contractor personnel, you could calculate the expected output (such as number of pages or number of entries per day, or the expected error rate per thousand entries). Then, if the contractor failed to meet the agreed upon QA deduction schedule, the Government could deduct payment.

Monitoring for QA
Deduction
Schedules

Monitoring for QA deduction schedules is sometimes made easier through automation. For example, automated systems can be set up to capture output rates and error rates for contractor data entry personnel, making the COTR's monitoring task easier. However, since the contractor will often dispute deductions for unsatisfactory performance, it is still vital that the Government document the performance by the contractor, whether or not automated procedures are used to capture the test data.

45.3 Performance Monitoring for Telecommunications

Performance Monitoring

Performance monitoring for telecommunications requires many of the monitoring tools and procedures already discussed in this chapter. However, telecommunications presents some special performance monitoring requirements and makes use of some unique monitoring procedures.

Performance Monitoring for Telecommunications

Telecommunications contracts present some unique requirements for performance monitoring. In the case of telecommunications, major concerns include the amount of volume of traffic being carried, the grade of service, and the overall availability of the system. Volume is important because it affects the tolls (rates charged for service). Grade of service and availability of the telecommunications system are important because the Government must ensure a very high availability rate to carry out vital business with minimal interruptions. *In the case of telecommunications, availability refers to the amount of time a system is available for processing transactions or calls.* In some cases, you may contract with third parties (other contractors) to assist the COTR in monitoring telecommunications services.

The procedures and tools for monitoring telecommunications performance include:

- traffic studies;
- traffic forecasts;
- switch matrix reviews, and
- response time credits.

Most of these performance monitoring requirements will be the responsibility of the COTR, but you should understand what they are.

(continued on next page)

45.3 Performance Monitoring for Telecommunications *(continued)*

Traffic Studies

Traffic studies are studies of the telecommunications traffic, conducted within the using agency by the COTR, assisted as necessary by telecommunications experts. The COTR will usually conduct traffic studies periodically to determine the volume, frequency and high and low points of traffic.

The purpose of the traffic studies is to provide a baseline of knowledge about the traffic. For example, an agency may estimate that a new system will carry 5,000 long distance telephone calls each day, but a traffic study may show that it actually generates 7,000 such calls each day. Traffic studies are useful in predicting trends and requirements for changes in services which may later require contract modifications.

Traffic Forecasts

Traffic forecasts are predictions of telecommunications requirements, based on observation of trend data gathered from earlier traffic studies and other information, such as expected changes in the agency's mission. Traffic forecasts are useful in predicting future requirements, including those that may require modifications to the contract.

For example, based on trends, a COTR may forecast that long distance telephone traffic in a certain office will triple within five years. This change in volume could have an impact on the rates that you may wish to negotiate.

Economic Price Adjustments

If the traffic is expected to rise or fall beyond a certain level, you may be required to negotiate an Economic Price Adjustment (EPA), an increase or decrease in the contract price based on traffic volume or other contingencies. That is why these monitoring procedures can be important.

Switch Matrix Reviews

Switch Matrix Reviews are studies of the switches allocated to the telecommunications system to determine if they provide adequate capacity for the Government's requirements. If not, there may be a requirement to increase the switching capacity by upgrading the number of circuit packs, line cards and memory.

(continued on next page)

45.3 Performance Monitoring for Telecommunications *(continued)*

Response Time
Credits

Response Time Credits are payment credits that accrue to the Government if the contractor is late in responding to calls for maintenance. These may be used for all types of FIP resources, but are especially critical in telecommunications because the Government insists on a very high availability rate for telecommunications. For example, the Government usually demands that telephone service availability rates be well above 99 percent. If contractor maintenance personnel delay repairs, the overall availability rate will fall and Government business may suffer. Once again, the key to obtaining response time credits is thorough monitoring of the system breakdowns and response times.

45.4 Unique Requirements for FIP Resource Contract Modifications

Change Orders and Modifications

As in any acquisition, it is likely that there may be a need to modify the contract. A *modification* is merely an authorized change to a contract after the award. A change order is an order issued by the Government and accepted by the contractor to provide a change in services. In a FIP resources contract lasting several years, you may expect several change orders and modifications.

Any modifications to the FIP resources acquisition contract may be proposed by either the contractor or by the Government. These changes may concern the delivery schedule, added work, or changes to the specifications, but the requested changes must be in writing.

For example, based on comments from users, the COTR may determine that additional training is needed, in addition to the training (if any) already in the contract. In this case, the COTR might recommend a modification, based on the technical requirement for more training.

Or, the contractor might believe that the Government personnel operating and maintaining a computer system are poorly trained and require additional training. In this case, the contractor might propose a modification to the contract. Of course, before accepting the contractor's proposal to modify the contract, you would ask the COTR to review the contractor's proposal for the modification.

If modifications are proposed by the contractor, the COTR, assisted by other technical personnel, will normally review the proposed changes for technical impact and provide recommendations to you.

Unilateral and Bilateral Modifications

Modifications to a FIP resources contract may be either *unilateral* or *bilateral*. If the contract specified the Government's right to incorporate unilateral modifications, then the contracting officer may simply sign a unilateral modification to the contract, binding the contractor to carry out the modification under fair and reasonable terms.

On the other hand, there may be honest disagreement concerning the scope and nature of a proposed modification. For example, the contractor may believe that the proposed scope of work for a modification should cost considerably more than the Government is willing to pay. In this case, it may be necessary for you to negotiate the terms and conditions of the modification(s), and both the contracting officer and the contractor will then sign a supplemental agreement or bilateral modification to the contract.

(continued on next page)

45.4 Unique Requirements for FIP Resource Contract Modifications

(continued)

Impact of Modifications

Of course, in any modification (unilateral or bilateral), you must consider the impact of such factors as time, scope, available funding, and extent of competition.

- *Time* —modifications to a FIP resources contract can be quite complex and require considerable time to plan, review and negotiate. Make sure that the COTR has sufficient time to review the proposed modifications and provide recommendations to you. If it is possible to foresee or predict a requirement far enough in advance, you should be able to write an *option* into the contract, rather than try to rush a modification to the contract later.
 - *Scope* —the scope of work proposed in the modification must be fair and reasonable to both the Government and to the contractor. Again, the COTR should be able to advise you as to the contractor's capability
 - *Available funding* —funding must be available for the proposed modification.
 - *Extent of competition* —do not try to use a modification to a FIP resources acquisition as a way to avoid the requirements for competition. On some long term contracts, there can be a tendency to keep modifying the existing contract, constantly adding new contractor tasks, rather starting a new solicitation to meet the requirements for competition.
-

SUMMARY

In this chapter, you learned to apply and analyze contract monitoring procedures for FIP resources.

Accreditation	A formal declaration by a designated approving authority (DAA) that an automated information system is approved to operate in a particular security mode, using a prescribed set of standards.
Acquisition	The acquiring by contract, with appropriated funds, of supplies or services (including construction) by and for the use of the Federal Government through purchase or lease, whether the supplies or services are already in existence or must be created, developed, demonstrated, and evaluated. Acquisition begins at the point when agency needs are established and includes the description of requirements to satisfy agency needs, solicitation and selection of sources, award of contracts, contract financing, contract performance, contract administration, and those technical and management functions directly related to the process of fulfilling agency needs by contract.
Acquisition Plan	A plan for an acquisition which serves as the basis for initiating the individual contracting actions necessary to acquire a system or support a program.
Acquisition Planning	The process by which the efforts of all personnel responsible for an acquisition are coordinated and integrated through a comprehensive plan for fulfilling the agency need in a timely manner and at a reasonable cost: includes development of an overall strategy for managing the acquisition.
Agency Procurement Request (APR)	a request by a Federal agency for GSA to acquire Federal information processing(FIP) resources or for GSA to delegate the authority to acquire FIP resources.
Agency-Unique Standards	<p>In cases where there are no Federal, national, or international standards, the FIRMR requires agencies to consider the development and use of standards for the agency.</p> <p>However, two major restrictions apply.</p> <p>First, such standards must NOT violate the requirements for “full and open competition” in the Competition in Contracting Act.</p> <p>Second, agencies planning to use an agency-unique standard must coordinate with NIST.</p>
Allocation	A system of dividing expenses and incomes among various branches, departments, etc., for a particular purpose.
Allotment	A share of funds granted to divide or distribute.

Alternate Standard	A standard other than a Federal standard. The head of the agency may permit use of such an alternate standard and the standards must be more stringent than the applicable federal standards and contain at least the functional provisions of the applicable federal standard.
Analysis of Alternatives	A process to identify, compare, and evaluate various alternatives to determine which alternative is the most advantageous to the Government. (FIRMR 201-20.2)
Analytic Modeling	A special type of FIP resources testing which uses a mathematical model of the system to represent the actual components and actions. The analytic model mimics the difficulty, speed, and other requirements that will be imposed on the “real world” FIP resource and predicts whether the real FIP resource will meet the requirements.
Application Software	A series of instructions or statements in a form acceptable to a computer, designed to cause the computer to execute an operation or operations necessary to process requirements. Application software may be either machine-dependent or machine-independent and may be general-purpose or designed to satisfy the requirements of a specialized process or a particular user.
Apportionment	Money taken from the Treasury to set apart or authorize for some specific purpose.
Appropriation	The approving of funding for an authorized activity The second stage in the funding process.
Augmentation	Adding to or upgrading existing FIP hardware or software to increase its productivity or prolong its useful life.
Authorization	The approving of activities for funding. The first stage in the funding process.
Authorization Legislation	A law which permits the establishment or continuation of Federal programs and agencies. Authorizing legislation is normally required before the enactment of budget authority, and such authority is normally provided in a separate appropriations act.
Benchmarking	The construction of user tests to verify performance of a proposed system by measuring its ability to execute a group of user programs that are representative of the projected workload within certain predetermined user time requirements.

Benefit-Cost Analysis	A special type of analysis done to determine the relative benefits of a course of action compared to the relative costs. In a benefit-cost analysis, you compare projected and present value benefits against the projected and present value of the costs.
Benefit-Cost Ratio	A number derived by dividing an alternative's present value benefits by present value costs. Benefit-cost ratio is one of several measures used to compare alternatives in a benefit-cost analysis.
Best And Final Offer (BAFO)	In competitive negotiations, proposals prepared by offeror in the competitive range following completion of discussions and receipt of a written request for BAFOs from the contracting officer.
Best Value Concept	The concept that allows award to the offeror providing the greatest value to the government in terms of trade-off between price/cost and technical/business merit. One or more of the factors other than cost or price are evaluated using multiple distinctions of merit.
Beta Version	A prototype version of software, before complete "debugging."
Board of Contract Appeals (BCA)	An instrumentality of a Federal department or agency which hears contractor appeals of contracting officer decisions on claims arising under or relating to a contract subject to the Contract Disputes Act.
Brand Name Description	A purchase description that identifies a product by its brand name and model or part number or other appropriate nomenclature by which the product is offered for sale.
Brand Name or Equal Breakeven	A commercial software product or its equivalent. The point at which cumulative benefits equal cumulative costs. Breakeven points are based on projected (not discounted) benefits and costs. Breakeven is one of several measures used to compare alternatives in a benefit-cost analysis.
Brokers	Function as agents between buyers and sellers and charge a commission which adds to the cost of the acquisition. Brokers may sometimes be contacted in market research for FIP resources which are known to be out of production (no longer manufactured), are difficult to locate, but are still required by an agency.
Brooks Act of 1965	Governs the acquisition and use of information technology in the federal government. This act was passed largely because Congress had become concerned that agencies' computer acquisition practices had resulted in the dominance of a single vendor in the federal government's computer inventory.

Budget	A plan for the coordination of resources and expenditures, based upon revenues received; an itemized allotment of funds for a given period.
Bundling	This is the term used for selling hardware with software already loaded. Normally, the use of <i>bundling</i> is discouraged in Government acquisitions, because it may discourage competition and may lock the agency into software it does not want or need, or that is incompatible with existing agency software.
Call Detail Report	In accordance with FIRMR Bulletin C-13, this means a record of long distance telephone calls showing the originating number; destination number; city and state; date and time of day the call was made; and the duration of the call. (Note that the Call Detail Report can provide a valuable tool to track the use or abuse of telephone service, but is subject to some restrictions.)
Capability validation	<p>The technical verification of the ability of a proposed FIP system configuration, replacement component, or the features or functions of its software, to satisfy functional requirements. The intent is to ensure that the proposed FIP resource can provide the required functions. FIP performance requirements are not implied or measured in the validation. Examples of capability validation include:</p> <ul style="list-style-type: none">(a) Operational capability demonstrations (OCDs) of the functions of the hardware, operating system, or support software;(b) Verification of conformance with information processing standards;(c) Expert examination of the technical literature supplied with the offer;(d) Contacts with other users of the proposed information processing resource; and(e) Vendor certification of conformance with the functional requirements.
Central Office of Record (COR)	In accordance with FIRMR Bulletin C-19, this means a central office within an agency or organization that maintains and safeguards records of accountable communications security (COMSEC) materials received or created by Government organizations subject to COR oversight.
Central Processing Unit (CPU)	The portion of a computer that includes circuits controlling the interpretation and execution of instructions. It executes programmed instructions, performs arithmetic and logical functions on data, and controls in put/output functions

Centrally-managed Item	In DoD acquisitions, any item or system (such as a computer) which is centrally procured and managed on a DoD-wide or military service-wide basis.
Centrex Service	A service offered by operating telephone companies which provides, from the telephone company office, functions and features comparable to those provided by a PBX.
Certification	The comprehensive evaluation of the technical and nontechnical security features of an automated information system and other safeguards, made in support of the accreditation process, that establishes the extent to which a particular design and implementation meet a specified set of security requirements.
Clarification	A communication with an offeror for the sole purpose of eliminating irregularities, informalities, or apparent clerical mistakes in the proposal.
Commerce Business Daily	A publication of the U.S. Department of Commerce in which Government agencies are required to announce (IFBs and RFPs) procurement invitations, contract awards, and sales of surplus property. A new edition of the CBD is issued every business day. Each edition contains approximately 500-1,000 notices. Each notice appears in the CBD only
Commercial Software	Software developed at the contractor's expense and available for sale or leasing to the general public.
Commercial Warranty	A commercial warranty is a written guarantee of the integrity of a product and of the maker's responsibility for the repair or replacement of defective parts (in the case of hardware) or the entire product (such as an application software package).
Commitment	An administrative reservation of funds, e.g. a requisition.
Common Distributable Charge	In accordance with FIRMR Bulletin C-15, this means a charge that GSA adds to the cost of each agency line served by a GSA-provided local service entity to recover management and overhead costs. This charge comprises those costs applicable to the particular local service entity as a whole and are not identified to any particular line or agency.
Common-Use Software	Software that deals with applications common to many agencies that would be useful to other agencies, and is written in such a way that minor variations in requirements can be accommodated without significant programming effort.

Communications Security (COMSEC)	In accordance with FIRMR Bulletin C-19, this means communications security systems, services and concepts that constitute protective measures taken to deny unauthorized persons information derived from telecommunications of the United States Government related to national security and to ensure the authenticity of any such communications.
Compatibility-Limited Requirement	A statement of FIP resources requirements expressed in terms that require the items to be compatible with existing FIP resources” (FIRMR 201-4.001).
Compatibility-Limited Specifications	Specifications which state that the required software must be compatible with existing hardware and/or software on hand in the requiring agency.
Competing Contractor	FAR 3.104-4(b)A competing contractor with respect to any procurement is any entity (such as an individual, partnership, corporation, educational institution, nonprofit or not for profit organization, or business unit) legally capable of entering into a contract or subcontract in its own name, or is reasonably likely to become, a competitor for or recipient of a contract or subcontract under that procurement. This term includes any other person acting on behalf of such an entity. It also includes the incumbent contractor in the case of a contract modification.
Competitive Range	All proposals that the CO determines have a reasonable chance of being selected for award, based on cost or price and other factors that were stated in the solicitation. Unless the CO decides to award without discussions, the CO must conduct written or oral discussion with all responsible offerors who submit proposals within the competitive range.
COMSEC	COMmunications SECurity systems, services, and concepts that constitute protective measures taken to deny unauthorized persons information derived from telecommunications of the United States Government related to national security and to ensure the authenticity of any such communications.
Consolidated Local Telecommunications Service	In accordance with FIRMR Bulletin C-15, this means local communications service provided by GSA to all Federal agencies located in a building, complex, or geographical area.
Consolidated Local Telecommunications Service	Local communications service provided by GSA to all Federal agencies located in a building, complex, or geographical area.

Contracting Officer (CO)	An agent of the Government (see “agency”) with authority to enter into, administer, or terminate contracts and make related determinations and findings.
Contracting Officer’s Representative (COR)	Represents and assists the CO and monitors performance. Accepts contract deliverables.
Contracting Officer’s Technical Representative (COTR)	Performs technical monitoring of contractor actions, as assigned by the CO. Serves as technical liaison. Accepts or rejects deliverables.
Conversion Study	A study conducted to determine the costs, risks, and magnitude of conversion from installed FIP resources to augmentation or replacement resources. (FIRMR 201-4.001 and 201-20.203-4)
Copyright	An original arrangement of information which the author can protect by a copyright notice on the material at time of publication. Copyrights are observed for the life of the author plus fifty years.
Cost Analysis	The review and evaluation of the separate cost elements and proposed profit of (a) an offeror's or contract's cost or pricing data and (b) the judgmental factors applied in projecting from the data to the estimated costs in order to form an opinion on the degree to which the proposed costs represent what the cost of the contract should be, assuming reasonable economy and efficiency.
Cost Effectiveness Analysis	A special type of analysis done to compare the relative costs of several alternatives. A cost effectiveness analysis is a benefit-cost analysis without the benefits. It is used when the benefits are the same for all alternatives or when benefits can’t be quantified (as in defense systems).
Cost Or Pricing Data	All facts as of the date of price agreement that prudent buyers and sellers would reasonably expect to affect price negotiations significantly. Cost or pricing data are factual, not judgmental, and are therefore verifiable. While they do not indicate the accuracy of the prospective contractor's judgment about estimated future costs or projections, they do include the data forming the basis for that judgment. Cost or pricing data are more than historical accounting data; they are all the facts that can be reasonably expected to contribute to the soundness of estimates of future costs and to the validity of determinations of costs already incurred.

Customer Premises Equipment (CPE)	All telecommunications equipment and inside wiring located on the customer side of the demarcation point (demark), the point established in a building or complex to separate customer equipment from telephone company equipment.
Customized Packaged Software	Commercial software which provides certain functions already “built in,” but requires additional software development in order to provide all the functions required by the requiring agency. Customized software often requires significant vendor support services, such as design, training, and maintenance. You may obtain these support services at the time of acquisition from the same vendor, or from a third party.
Cut-Over	The physical changing of lines from one telephone system to another, or the installation of a new system. According to Newton’s Telephone Dictionary, there are two types of cutovers, flash and parallel. A flash cut-over occurs when the existing telephone traffic is completely changed from the “old” to the “new” system all at once (usually over a weekend when there is no office telephone traffic.) A parallel cut-over occurs when the old system is left in operation and the new one is installed around it. (For a time there are two systems operating.) (Note that one key factor you must consider in acquiring telecommunications is the requirement for a cut-over period.)
Data	Recorded information regardless of the form or the media on which it may be recorded.
Data Encryption Standard	A cryptographic algorithm for the protection of unclassified data, published in Federal Information Processing Standard (FIPS) 46.
Data Encryption	The process of encoding data transmitted, received, handled, or otherwise processed by any information processing equipment.
Data Linking	The ability to embed references to data which has been developed with another application within the current application. For example, a common use of data linking is linking a word processing application to a spreadsheet package. It uses “dead links,” “live links” or “object-oriented programming” (OOP).

Delegation of Procurement Authority (DPA)	<p>A term that refers to GSA’s formal assignment to other agencies of its statutory authority to acquire “ADPE” (defined to include services and telecommunications). GSA delegates authority in three ways:</p> <ul style="list-style-type: none"> • Regulatory Delegations, • Specific Agency Delegations, and • Specific Acquisition Delegations.
Department of Defense Index of Specifications and Standards (DODISS)	<p>The DOD publication that lists unclassified Federal and military specifications and standards, related standardization documents, and voluntary standards approved for use by DOD.</p>
Designated Senior Official (DSO)	<p>(a) The senior official designated by executive agencies pursuant to the Paperwork Reduction Act to be responsible for carrying out the agency’s IRM functions (see 44 U.S.C. 3506); or (b) The senior IRM official designated by the agency head for Federal agencies not subject to the Paperwork Reduction Act to be responsible for acquisitions of FIP resources made pursuant to a DPA.</p>
Design Specification	<p>A purchase description that establishes precise measurements, tolerances, materials, in process and finished product tests. Quality control, inspection requirements, and other specific details of the deliverable.</p>
Deviation	<p>(a) The issuance or use of a policy, procedure, practice, solicitation provision, contract clause, or method pertaining to the acquisition, management, or use of FIP resources that is inconsistent with the FIRMR,</p> <p>(b) The omission or modification of any policy, procedure, practice, solicitation provision or contract clause required by the FIRMR, or</p> <p>(c) The authorization of lesser or greater limitations on the delegation, use, or application of any policy, procedure, solicitation provision, or contract clause prescribed by the FIRMR, except that this does not preclude an agency from setting delegation thresholds at more restrictive levels than those established by the FIRMR.</p>
Disbursement	<p>Payment for a legal liability of the Government.</p>
Discount Factor	<p>A multiplier, varying by interest rate and time, used to discount future costs and benefits to their present values.</p>

Discount Rate	The rate used to develop discount factors which convert future costs to their present value. Discount rates are based on what the United States Treasury pays to borrow money for periods from 91 days to 30 years. These rates are published in OMB Circular A-94 and are updated annually at the time of the President's budget submission to Congress. Rate updates are also available upon request from OMB's Office of Economic Policy at (202) 395-3391.
Discounting	The process of converting future dollars to their present values by multiplying future dollars times a discount factor.
Down Time	The period of time during which a FIP resource is not available due to malfunction, maintenance, or other causes. This can include repair time.
Embedded FIP Equipment	Equipment that is an integral part of the product, where the principal function of the product is not the "automatic acquisition, storage, manipulation, management, movement, control display, switching, interchange, transmission, or reception of data or information.
Employee	The term "employee" includes contractors, subcontractors, consultants, experts, or advisors (other than a competing contractor) acting on behalf of, or providing advice to, the Government with respect to any phase of the procurement concerned.
Evaluation Factors	Descriptions of those aspects of an offer that are evaluated to assess which offer provides the proposal to best meet the Government's requirements as described in the solicitation. See also Cost/Price Factors and Technical Factors.
Evaluation Standards	A predetermined level of merit against which proposals are measured. Standards are usually a statement of the minimum level of compliance with a requirement which must be offered for a proposal to be considered acceptable.
Excess FIP Equipment	FIP equipment controlled by a Federal agency but no longer required for its needs.
Expenditure	The act of disbursing funds; a charge against available funds; a cost.
Expense/ Investment Criteria	If the total FIP system cost is more than the dollar threshold established by Congress in the appropriations legislation, then all components must be funded as an investment (procurement appropriation). If the total system cost is less, then the components are considered as an expense and funded under operations and maintenance funds.

Facsimile Machine (FAX)	The process by which fixed graphic materials, including pictures or images, is scanned and the information converted into electrical signals that may be transmitted over a telecommunications systems and used to record a copy of the original.
Federal Acquisition Regulation (FAR)	Uniform policies and procedures for acquisition by executive agencies. The FAR is jointly prescribed, prepared, issued and maintained by the Department of Defense, the General Services Administration, and the National Aeronautics and Space Administration.
Federal Agency	Any executive agency or any establishment in the legislative or judicial branch of the Government, except the Senate, the House of Representatives, the Architect of the Capitol, and any activities under the Architect's direction.
Federal Property and Administrative Services Act of 1949	This Act created GSA: "to provide for the Government an economic and efficient system for...the procurement and supply of personal property and nonpersonal services, including related functions such as contracting..."
Federal Information Processing (FIP) Resources	Any equipment or interconnected system or subsystems of equipment that is used in the automatic acquisition, storage, manipulation, management, movement, control, display, switching, interchange, transmission, or reception, of data or information
Federal Security Telephone Service (FSTS)	In accordance with FIRMR Bulletin C-19, FSTS is a worldwide secure voice service designed to protect sensitive and classified voice transmissions.
Federal Specification or Standard	A specification or standard issued or controlled by the General Services Administration and listed in the GSA Index of Federal Specifications Standards, and Commercial Item Descriptions.
Federal Telecommunications Standards (FED-STDS)	FIRMR 201-20.303 defines these as official Government publications relating to standards developed by the National Communications System under delegation from GSA. FED-STDS include those categories in the Federal Supply Class (FSC) for "Telecommunications" of the Federal Standards Program as redefined as Automatic Data Processing Equipment by Public Law 99-500. (Note that in researching standards for a telecommunications acquisition, you should refer program office or agency technical personnel to these standards as a basic reference for developing the acquisition plan and include reference to these standards, as appropriate, in the solicitation.)

Federal Telecom-munications System (FTS)	FIRMR 201-4.001 defines this as the umbrella for local and long distance telecommunications services, including FTS2000 long distance services, provided, operated, managed, or maintained by GSA for the common use of all Federal agencies and other authorized users. (Note - FTS2000 is the largest and best known of these and is discussed in detail elsewhere in this chapter.)
Federal Telecom-munications System	The umbrella of local and long distance telecommunications services, including FTS2000 long distance services, provided, operated, managed, or maintained by GSA for the common use of all Federal agencies and other authorized users.
File Conversion Utilities	Software programs used to convert data between the de facto standard and a vendor's proprietary software package. Contractors are usually willing to provide file conversion utility programs as part of a commercial software package.
File Import/Export	The ability to read and write data files directly to or from a de facto standard format. The most commonly used method to do this is ASCII.
File Security	The means by which access to computer files is limited to authorized users only.
Financed Requirement	Funds are set aside in the budget to support that acquisition
FIP Maintenance Services	The examination, testing, repair, or part replacement functions performed on FIP equipment or software."
Financial Management Systems	Financial management systems are the financial systems and the financial parts of other information systems.
Financial Systems	<p>Financial systems are information systems with one or more applications that:</p> <ul style="list-style-type: none">• Collect, process, maintain, transmit, and report data about financial events;• Support financial planning or budgeting activities;• Accumulate and report cost information; and• Support the preparation of financial statements.

FIP Services	Any service, other than FIP Support Services, performed or furnished by using FIP equipment or software.
FIP Support Services	Any commercial nonpersonal service, including FIP maintenance, used in support of FIP equipment, software, or services. <ul style="list-style-type: none"> • Principal Period of Maintenance (PPM) —defined as the normal business period or hours required by the specific operation (e.g., 8 A.M. to 5 P.M.) plus one hour for lunch, or the hours required for the specific operation. • Other Than Principal Period of Maintenance (OPPM)—defined as any other than PPM.
Firmware	Software in fixed or wired-in storage. Sometimes called hard software.
Functional Specification	A purchase description that describes the deliverable in terms of performance characteristics to satisfy the intended use.
Fund Cite	An administrative citation or accounting symbol listing agency, appropriation, program, etc.
General Services Board of Contract Appeals (GSBCA)	The GSBCA is a board which, among other responsibilities, has statutory authority to hear protests filed with it relative to an agency's handling of solicitations for acquisition of automated data processing (ADP) equipment or related resources.
Government Property	All property owned by or leased to the Government or acquired by the Government under the terms of the contract. It includes both (1) Government-furnished property and (2) property acquired or otherwise provided by the contractor for performing a contract and to which the Government has title.
Government Furnished Property	Property in the possession of, or directly acquired by, the Government and subsequently made available to the contractor.
Government-Furnished Services	According to FIRMR Bulletin C-18, means those services directly acquired by the Government and subsequently made available to a contractor.
Government Purpose License Rights (GPLR)	The rights to use, duplicate or disclose data in whole or in part and in any manner, <i>for Government purposes only</i> , and to have or permit others to do so for Government purposes only.

Graphical User Interface (GUI)	The use of “icons” or objects which represent a function on the computer screen (usually in a “pull down menu”). The user activates the function by pointing at the icon with a “mouse.” Common examples include the Macintosh and Microsoft Windows.
GSA Index of Federal Specifications, Standards and Commercial Item Descriptions	The GSA publication that lists Federal specifications and standards, including supplements, that have been implemented for use by all agencies.
Gratuity or Other Thing of Value	FAR 3.104-4(f) A "gratuity or other thing of value" is any gift, favor, entertainment, or other item having monetary value. The phrase includes services, conference fees, vendor promotional training, transportation, lodging and meals, as well as discounts not available to the general public, and loans extended by anyone other than a bank or financial institution.
Head of The Contracting Activity (HCA)	The official who has overall responsibility for managing the contracting activity.
Hostile Software	Software programmed to delay, damage, or destroy other software.
Hybrid Test Methods	A combination of different types of FIP resources testing used when no one type of testing is suitable for a specific acquisition.
Incidental Use	FIP resources acquired by a contractor are incidental to the performance of a contract when:(i) None of the principal tasks of the contract depend directly on the use of the FIP resources, OR(ii) The requirements of the contract do not have the effect of substantially restricting the contractor’s discretion in the acquisition and management of FIP resources, whether the use of FIP resources is or is not specifically stated in the contract. [FIRMR 201-1.002-1(b)(2)]
Information Accessibility	FIRMR Bulletin C-10 identifies this as the application or configuration of FIP resources in a manner that accommodates the functional limitations of individuals with disabilities so as to promote productivity and provide access to work-related or public information resources. An example in telecommunications would be the use of Telecommunications Devices for the Deaf (TDDs) or special headphones to provide louder signals.

Information Resources Management	The planning, budgeting, organizing, directing, training, promoting, controlling, and management activities associated with the burden, collection, creation, use and dissemination of information by agencies, and includes the management of information and related resources, such as Federal information processing resources.
Information System Security (INFOSEC)	According to FIRMR Bulletin C-19, means a composite of factors necessary to protect FIP systems and the information they process to prevent exploitation through interception, unauthorized electronic access, or related technical intelligence threats, and to ensure authenticity. This protection results from the application of security measures; including cryptosecurity, transmission security, emission security, and computer security, to systems that generate, store, process, transfer, or communicate information of use to an adversary, and also includes the physical protection of sensitive material and sensitive technical security. (Note - for a more complete discussion of security issues, see Chapter 19, "Computer Security for FIP Resources Acquisitions.")
Information Systems Planning	Development of requirements analysis, acquisition plan, and detailed statement of requirements with specifications and standards. Example: Develop documents and specifications to acquire 250,000 handheld computers under an indefinite quantity, indefinite delivery contract for firm fixed price. Program managers, possibly IRM managers or "Trail Boss," technical and contracting office personnel
Inherently Long Distance Feature	Defined by FIRMR Bulletin C-18 as a feature that can be provided only as part of or by a long distance network.
Integrated Software Packages	Computer software applications packages which are fully linked and offer multiple applications, usually word-processing, graphics and spreadsheets. An example is Microsoft's "Works."
Intellectual Property	Any <i>intangible</i> property, such as an idea, for which a developer claims credit and rights of development, and includes designs, technical data and written documentation which did not previously exist before the owner developed it.

Integrators	Specialize in selling integration services for FIP resource products. Normally, integrators do NOT manufacture FIP products (major components), although they may make some key devices that allow equipment made by different OEMs or other sources to communicate and operate with one another. They put together the components of a FIP system and make them work. Integrators may provide both products and services—or just services. Integrators are also called system integrators.
Intercity	According to FIRMR Bulletin C-18, as it applies to FTS2000, means a telecommunications transmission between two or more locations that cannot be accomplished within a local service area. “Intercity” and “long distance” mean the same thing.
Interim Standard	a standard that has not been permanently adopted by the Federal Government, but which may be used in an acquisition for FIP resources if it is to the agency’s advantage.
Intermediate File Formats	A format used when the conversion utility does not work with a file conversion utility because it cannot convert directly to a de facto standard. In this case, a software package first converts the proprietary file to an intermediary and another software package then converts the intermediary file into a proprietary file.
Interoperability	The ability of FIP resources to provide services to and accept services from other FIP resources and to use the services so exchanged to enable them to operate effectively together.
Lease-Purchase Analysis	Determines whether leasing or purchasing is the most economical way to finance the acquisition.

Licensing Agreements

Types of licensing agreements include:

- **Enterprise**—is for use by any site or location connected with an enterprise, project, or program. Enterprise can be defined as a physical location or an entire agency.
- **Exclusive**—only one licensee is authorized to use
- **Multiple Site License**—for use at several sites
- **Nonexclusive**—multiple users are authorized to use
- **Perpetual**—one-time payment and use forever
- **Single Site License**—for use at a single location, such as one research lab.
- **Term**—limited use for month or year, etc.
- **Unlimited License**—for very widespread use, may apply to Government-wide use by all agencies and allow release to other parties with no limitations. Normally, the Government prefers the broadest possible licensing arrangements for maximum flexibility, while observing the valid concerns of the owner or offeror.

Limited Rights

Rights to use, duplicate, or disclose technical data, in whole or in part, by or for the Government, with the express limitation that such technical data shall NOT, without the written permission of the party asserting limited rights, be:

- released or disclosed outside the Government;
- used by the Government for manufacture, or in the case of computer software documentation, for preparing the same or similar computer software;
- used by a party other than the Government, except that the Government may release or disclose technical data to persons outside the Government, or permit the use of technical data by such persons if such release or disclosure is necessary for emergency repair and overhaul; or is a release or disclosure of technical data (other than detailed manufacturing or process data) or use of such data by a foreign government that is in the interest of the Government and is required for evaluation or informational purposes.”

Live testing

A FIP resources testing procedure that does not require the software or hardware be tested on all aspects of performance and capabilities. Instead, Government technical personnel select only certain aspects of capability and performance for testing.

Local Network	Defined by FIRMR Bulletin C-18, as locations within a local service area, interconnected by communications circuits.
Local Service Area	Defined by FIRMR Bulletin C-18, as service within a 25 mile radius, within a Local Access and Transport Area (LATA), or within a metropolitan area.
Long Distance Telephone Service	FIRMR 201-4.001 defines this as any service or facility purchased with Government funds for completing telephone calls outside of the local service area.
Lowest Overall Cost	<p>The least expenditure of funds over the system life, price and other factors considered, including, but not necessarily limited to—</p> <ul style="list-style-type: none">(a) prices for the FIP resources,(b) the present value adjustment, if used, and(c) the identifiable and quantifiable costs—<ul style="list-style-type: none">(1) directly related to the acquisition and use of the FIP resources,(2) of conducting the contract action, and(3) of other administrative efforts directly related to the acquisition process.
Maintenance Update	A more extensive change to a commercial software package than a minor modification. A maintenance update may contain a number of new upgrades of features.
Major System	OMB Circular A-109 defines a major system as “that combination of elements that will function together to produce the capabilities required to fill a mission need.” The elements may include hardware, equipment, software, construction, or real property.
Mandatory-for-Consideration	Source is one used when it satisfies the requirement AND is the most advantageous alternative.
Mandatory-for-Use program	A mandatory program unless a GSA exception has been granted.
Market Research	Collecting and analyzing information about the entire market available to satisfy agency needs to arrive at the most suitable approach to acquiring, distributing, and supporting supplies and services.
Microwave	A term loosely applied to those radio frequency wavelengths that are sufficiently short to exhibit some of the properties of light, e.g., they are easily concentrated into a beam.

Minor Modification	A relatively minor change to existing software, usually adding or enhancing a particular feature
Modem	Acronym for MOdulator-DEModulator. A device that modulates and demodulates signals. For example, a computer modem modulates (translates) computer signals into a form suitable for transmission over telephone lines and demodulates (converts) telephone signals back into a form suitable for a computer.
Most Advantageous Alternative	The alternative which provides the greatest value to the Government over the system life, in terms of price, cost, quality, performance and any other relevant factors. (FIRMR 201-20.203-4)
Multi-user Software	Intended to be used on a minicomputer, mainframe computer or server, may require the services of technical personnel to install, maintain and periodically service, but requires no modification to the applications package itself.
National Security and Emergency Preparedness (NSEP)	Those physical, technical, and administrative characteristics of FIP systems that will ensure a prescribed level in times of national or other emergencies, including nuclear attack.
Net Present Value	The difference between the present value of benefits and the present value of costs; sometimes referred to as a net benefit when benefits exceed costs, or a net cost when costs exceed benefits. Net present value is one of several measures used to compare alternatives in a benefit-cost analysis.
Network	A combination of terminals and circuits in which transmission facilities interconnect the user stations
New Equipment	Equipment that has never been installed.
New Version	Commercial software that is intended to supersede or replace the older versions available to the public. Usually, a new version of commercial software contains many features that are not available with the older versions and may even be fully or partly incompatible with the older versions.
Nominal Discount Rates	Discount rates that <i>are adjusted</i> for the effect of actual or expected inflation or deflation. Nominal rates are normally used for budgeting, lease-purchase determinations, and cost evaluation. You will find these rates in Appendix C of OMB Circular A-94.

Non-inherently Long Distance Features	Those features that can be provided without the use of a long distance network (FIRMR Bulletin C-18).
Obligation	A legal reservation of funds; a contract; an agreement enforceable by law: budgetary resources must be available before an obligation can be incurred legally.
Obligation of Funds	Legally binding commitments, such as contract awards, made by Federal agencies during a given period that will require outlays during the same or some future period.
Obsolescence	The state of FIP hardware or software that is either in a degenerative condition which if not corrected will render the resource useless, or becoming technologically outmoded compared to other hardware or software being sold.
Office of Federal Procurement Policy (OFPP)	An organization within the Office of Management and Budget (OMB) that provides leadership and direction to Federal procurement programs.
Office of Management And Budget (OMB)	Federal agency that recommends and monitors Federal programs and funding levels, develops and issues Governmentwide policy guidance on management concerns, and reviews proposed regulations.
Operations and Demonstrations Test.	A FIP resources testing procedure in which the contractor demonstrates to Government experts that the FIP hardware and/or software performs as stated and meets capability and performance requirements.
Operating System Software	The software that runs the computer by sending instructions to the computer and tells it which operations to perform. For the most part, operating system software is “invisible” or “transparent” to the user. It cannot be changed, except by software programmers.
Operational Planning	Identification, scheduling and control of activities to support day-to-day agency activities over one year or less.
Original Equipment Manufacturer (OEM)	a vendor who manufactures FIP resources. The vendor may sell its products directly and/or through dealers or distributors.

Outdated FIP Equipment	Any FIP equipment over eight years old, based on the initial commercial installation date of that model of equipment, and that is no longer in current production.
Paperwork Reduction Reauthorization Act of 1986	Defined automated data processing equipment (ADPE) in the law, ending disputes that had persisted since passage of the <i>Brooks Act</i> . It expanded GSA's exclusive procurement and management authorities to include federal contracts "making significant use" of ADPE. ADPE acquired and used by a contractor that are "incidental to the performance" of Federal contracts were excluded from GSA's authority.
Paperwork Reduction Act of 1980	Was enacted by Congress to reduce the federal government's paperwork burden on the public. This Act also introduced the concept of "information management" into law.
Patent	A new or novel item or new process that has been reduced to practice. The owner of a patent is the first person who filed a patent with the patent office. The patent owner then receives a 17-year monopoly on the use of the patent.
Performance Specification	A purchase description that describes the deliverable in terms of desired operational characteristics. Performance specifications tend to be more restrictive than functional specifications, in terms of limiting alternatives which the Government will consider and defining separate performance standards for each such alternative.
Performance Validation	The technical verification of the ability of a proposed FIP system configuration or replacement component to meet agency-specified performance requirements. Examples include timed executions of actual or sample workloads, remote terminal emulation with simulated on-line workloads, acceptance testing with current software and files, stress testing with exaggerated workloads, workload modeling, benchmarking, and simulation modeling.
Performance Work Statement (PWS)	is a work statement or scope of services on which the Government and the prospective bidders base their estimates of performance

Personal and Substantial Participation	<p>To participate personally and substantially in a particular procurement, you must have active and significant involvement in activities directly related to the procurement.</p> <ul style="list-style-type: none"> • To participate personally, you must participate directly. This includes the participation of a subordinate when actually directed by the supervisor in the matter. • To participate substantially, your involvement must be significant to the matter. For example, the review of procurement documents solely to determine compliance with applicable regulatory, administrative, or budgetary requirements or procedures, does not constitute substantial participation in a procurement. To be substantial, participation must be more than official responsibility, knowledge, perfunctory involvement, or involvement on an administrative or peripheral issue. A finding of substantiality should be based not only on the effort devoted to a matter, but on the importance of the effort. While a series of peripheral involvements may be insubstantial, the single act of approving or participating in a critical step may be substantial.
Point of Connection	A location within a building where an agency's wire or cable connects to the consolidated system's facilities. Most office buildings have several such points on each floor or hallway.
Present Value Analysis	An analysis performed to determine the present value of a future cost or benefit, expressed in today's dollars.
Present Value	The value of a cost or benefit expressed in today's dollars, regardless of the time of acquisition or realization.
Preventive Maintenance	Regularly scheduled activities to keep hardware in good operating order (e.g., cleaning parts, removing dust, replacing worn parts) before an actual breakdown occurs.
Price Analysis	The process of examining and evaluating a proposed price without evaluating its separate cost elements and proposed profit. ⁴²
Privacy Act of 1974	Forbids agencies to have personnel files which are secret. It establishes that any individual has a right to request, review and correct information in his/her file and determine when, how, and to which extent, information shall be released to other parties. This Act gives any individual the right to sue the Federal government if his/her rights to privacy have been violated.

Private Branch Exchange (PBX)	A private telecommunications exchange that usually includes access to the public switched network
Procurement Official	<p>You are a procurement official if you are a Government civilian or military official or an employee who has participated personally and substantially in any of the following activities for a particular procurement:</p> <ul style="list-style-type: none"> • Drafting a specification or a statement of work; • Review and approval of a specification or statement of work; • Preparation or development of procurement or purchase requests; • The preparation or issuance of a solicitation; • Evaluation of bids or proposals; • Selection of sources; • Negotiations to establish the price or terms and conditions of the contract or contract modification; or • Review and approval of the award of the contract or contract modification.
Procurement Planning	Upon acceptance of the Purchase Request, the plan developed by a CO for soliciting offers, evaluating offers, and awarding a contract.
Proprietary Information	Proprietary information is information contained in a bid or proposal or otherwise submitted to the Government by a competing contractor in response to the conduct of a particular procurement, or in an unsolicited proposal, that has been marked by the competing contractor as proprietary information in accordance with applicable law and regulation.
Protest	A written objection by an interested party to a solicitation, a proposed award, or an award of a contract.
Quality Assurance (QA)	Functions, including inspection, performed to determine whether a contractor has fulfilled the contract obligations pertaining to quality and quantity.
Radar Equipment	Any radio detection device that provides information on range, azimuth, or elevation of objects.

Radio Equipment	Any equipment or interconnected system or subsystem of equipment (both transmission and reception) that is used to communicate over a distance by modulating and radiating electromagnetic waves in space without artificial guide—does NOT include such items as microwave, satellite, or cellular telephone equipment.
Real Discount Rate	Discount rates that are <i>not adjusted</i> for the effects of inflation or deflation. Real rates are normally used in benefit-cost analysis. You will also find these rates in Appendix C of OMB Circular A-94.
Records	All books, papers, maps, photos, machine readable materials, or other documentary materials, regardless of physical form, made or received by a Government agency under Federal law or in connection with transaction of public business and preserved or appropriate for preservation by that agency or its legitimate successor as evidence of the organization, functions, policies, decisions, procedures, operations, or other activities of the Government, or because of the informational value of data in them. Library and museum material made or acquired and preserved solely for reference or exhibition purposes. Extra copies of documents preserved only for convenience of reference, and stocks of publications and/or documents are not included.
Records Creation	The production or reproduction of any record.
Records Disposition	Any activity with respect to disposal of temporary records no longer necessary for the conduct of business, by destruction or donation, transfer of records to Federal agency storage facilities, transfer to the National Archives or transfer to another Federal agency.
Records Maintenance and Use	Any activity involving location of records of a Federal agency; storage, retrieval and handling of records kept at an office, file locations, or selection and utilization of equipment and supplies associated with records and copying.
Regulatory Delegation	Sometimes referred to as a “blanket DPA.” If your acquisition meets the conditions for a regulatory delegation, you do not need to submit an agency procurement request to GSA. Your agency automatically has authority under regulation to buy the resource.
Remedial Maintenance	Determining why equipment is malfunctioning (troubleshooting and diagnostics) and repairing it, including replacement of broken parts.

Repair Time	The actual time required to repair a FIP resource from the time that repair actually begins until the resource is returned to service. Note that this is less than downtime.
Residual Value	The proceeds, less removal and disposal costs, if any, realized upon disposition of a tangible capital asset. Residual value is normally <i>not</i> estimated for FIP resources.
Response Time	The period of time in which a maintenance contractor must respond to an agency's call for service. The time allowed is specified in the contract.
Risk	<p>The probability of not attaining the goals for which the party entered into a contract. For the contractor (seller), the principal business or financial risk is an unexpected loss of money on the contract. For the Government, the principal risk are that:</p> <ul style="list-style-type: none"> • The total cost of the acquisition will be higher than expected or unreasonable in relation to the actual costs of performance. • The contractor will fail to deliver or will not deliver on time. • The final deliverable will not satisfy the Government's actual need, whether or not "acceptable" under the terms and conditions of the contract. • The Government's need will change prior to receipt of the deliverable.
Satellite Communications	Any telecommunications services provided via one or more satellite relays and their associated uplinks and downlinks.
Sensitive Information	Any information, the loss, misuse, or unauthorized access to or modification of which, could adversely affect the national interest or the conduct of Federal programs, or the privacy to which individuals are entitled under section 552a of Title 5, under the Privacy Act, but which has not been specifically authorized under criteria established by an Executive Order or an Act of Congress to be kept secret in the interest of national defense or foreign policy.
Shrink-wrapped Commercial Software.	Commercial software that is completely self-contained and requires little or no modification. Most of it is application software. You can usually install it using only floppy diskettes and the user's manual. You would usually use this type of commercial application software on a single microcomputer, such as your desktop computer.

Significant Use	Significant use of FIP resources means: (i) the service or product of the contract could not reasonably be produced or performed without the use of FIP resources, AND(ii) the dollar value of FIP resources expended by the contractor to perform the service or furnish the product is expected to exceed \$500,000 or 20 percent of the estimated cost of the contract, whichever amount is lower. [FIRMR 201-1.002-1(b)(3)]
Single Server Concept	A concept under which either GSA or another agency is responsible for providing service to all agencies at a location (FIRMR Bulletin C-15). For example, GSA may provide all telephone services in a building occupied by several Federal agencies.
Software Conversion	Modifying programs and data used on one system so that they can be used on another system. Sometime the cost of conversion can be greater than the cost of acquiring new commercial software.
Software Documentation	Printed material which explains how the software operates
Sonar Equipment	An apparatus that detects the presence and location of a submerged object by means of sonic, subsonic, or supersonic waves reflected back to it from the object.
Source Selection	The process of soliciting and evaluating offers for award in a competitive negotiated environment.
Source Selection Authority (SSA)	The Government official in charge of selecting the source.
Source Selection Advisors	Personnel responsible for providing source selection advice to the SSA and SSEB
Source Selection Advisory Council (SSAC)	High level agency personnel that oversee the functioning of the SSEB and that may make recommendations to the SSA.
Source Selection Evaluation Board	Specialists who are responsible for assisting the Contracting Officer in developing the source selection plan and for evaluating proposals in accordance with the source selection plan and the RFP.

Source Selection Plan	<p>A plan containing at a minimum the following:</p> <ul style="list-style-type: none"> • description of the organization structure • identify members of the boards or advisors • proposed presolicitation activities • summary of the acquisition strategy • statement of proposed evaluation factors and any significant subfactors, & their relative importance • description of the evaluation process, methodology, and techniques to be used • schedule of significant milestones.
Source Selection Information	<p>Source selection information is information (including information stored in electronic, magnetic, audio or video formats) which is prepared or developed for use by the Government to conduct a particular procurement and:</p> <ul style="list-style-type: none"> • The disclosure of which to a competing contractor would jeopardize the integrity or successful completion of the procurement concerned; and • Is required by statute, regulation, or order to be secured in a source selection file or other facility to prevent disclosure.
Source Selection Plan	<p>A plan containing at a minimum the following:</p> <ul style="list-style-type: none"> • description of the organization structure • identify members of the boards or advisors • proposed presolicitation activities • summary of the acquisition strategy • statement of proposed evaluation factors and any significant subfactors, & their relative importance • description of the evaluation process, methodology, and techniques to be used • schedule of significant milestones.
Specific Acquisition Delegation	<p>an APR is specific to a single acquisition, as is the ensuing delegation</p>
Specific Agency Delegation	<p>This type of delegation modifies for one agency (or part of an agency) the Governmentwide regulatory delegations.</p>

Specific Make and Model	A description of the government's requirement for FIP resources that is so restrictive that only a particular manufacturer's products will satisfy the government's needs, regardless of the number of suppliers that may be able to furnish that manufacturer's products.
Specific Make And Model Specification	A description of the Government's requirements for FIP resources that is so restrictive <i>that only a particular manufacturer's products will satisfy</i> the Government's needs, regardless of the number of suppliers that may be able to furnish that manufacturer's products" (FIRMR 201-4.001).
Specification	A description of the technical requirements for a material product or service that includes the criteria for determining whether these requirements are met.
Standard	A document that establishes engineering and technical limitations and applications of items, materials, processes, methods, designs, and engineering practices. It includes any related criteria deemed essential to achieve the highest practical degree of uniformity in materials or products, or interchangeability of parts used in those products, Standards may be used in specifications, invitations for bids, requests for proposals, and contracts.
Statement of Work	A form of specification used in setting forth a requirement for services or work which describes the work or services to be performed, explains the methods to be used, and identifies the products to be acquired.
Strategic Planning	Definition of agency's major missions, vision, goals, and objectives over 5 years or more. Example of Agency Strategic Plan: Maintain armed service personnel, equipped with the necessary tools, in combat-ready status. Example of IRM Strategic Plan: Ensure ready information and communications for combat troops in the field. Non-DoD personnel also need ready information in the field, e.g., USDA crop insurance adjusters, relief efforts during droughts, border inspectors. High-level management staff, Program administrators and IRM managers
Switching Function	Any switching equipment or switching arrangement used to connect agency Customer Premise Equipment (CPE) phone exchange to telephone company equipment that would permit or cause a line to function as a trunk. Only GSA will provide this type of a switching function at a consolidated location.

System	A number of components or items that will be interconnected, which are designed primarily to operate together, and are procured at about the same time. A series of components necessary to satisfy a stated Government requirement.
System life	A projection of the time period that begins with the installation of the FIP resource and ends when the agency's need for that resource has terminated.
Tactical Planning	Identification, scheduling, management, and control of tasks necessary to accomplish individual activities in the strategic plan over a one-to-five year period. Example: Establish priorities for deployment of information systems technology for DoD and Non-DoD personnel. IRM and Program managers
Telecommunications Device for the Deaf (TDD)	A machine that uses typed input and output, usually with a visual text display, to enable individuals with hearing or speech impairments to communicate over a telecommunications network.
Telecommunications Facilities	Equipment used for such modes of transmission as telephone, data, facsimile, video, radio, audio, and such corollary items as switches, wire, cable, access arrangements, and communications security facilities.
Telecommunications resources	Telecommunications equipment, facilities and services.
Telecommunications Services	The transmission, emission, or reception of signals, signs, writing, images, sounds, intelligence of any nature, by wire, cable, satellite, fiber optics, laser, radio, or any other electronic, electric, electromagnetic, or acoustically coupled means. The term includes the telecommunications facilities necessary to provide such services.
Telecommunications Switching Function	Any service or equipment that has a primary function to switch telephone calls at a location. This term excludes service or equipment necessary to meet agency requirements that cannot be met by an existing switching function.
Television Equipment	Any equipment (both transmission and reception) used for the conversion of transient visual images into electrical signals that can be transmitted by radio or wire to distant receivers where the signals can be reconverted to the original visual images—does NOT include such items as monitors for computers or computer terminals or video conferencing equipment.

Tempest	An unclassified short name referring to investigations and studies of Compromising Emanations (CE). CE are defined as unintentional data-related or intelligence-bearing signals, which if intercepted and analyzed, disclose the national security information-processing equipment.
Template	A part of software which acts as a generic “framework” or set of instructions to permit easy customization by a programmer
Termination Charges	Those charges that GSA and other agencies will incur when an agency leaves a GSA consolidated service location. The agency leaving a GSA consolidated location is responsible for its appropriate share of the termination liability.
Third Party Vendors	Vendors who purchase FIP products from OEMs and other parties and resell the products to the end user. Since third party vendors buy at wholesale prices in great volume, they can often sell at competitive retail prices.
Toll-free Telephone Service	According to FIRMR 201-4.001, means any incoming circuit arrangement that allows the public to make long distance telephone calls to authorized locations at Government expense. Toll-free telephone service is used for providing or obtaining information concerning Government programs, such as social welfare, disaster aid, veterans’ affairs, and income tax assistance.
Total System Cost	The aggregate cost of all equipment items and software acquired to meet a specific requirement. Includes installation if covered in a contract and required for system integration. Does NOT include real estate preparation costs, such as building modification or cable trenching funded under “construction” funding rules.
Trademark	A device, such as a word or illustration, pointing distinctly to the origin or ownership of merchandise to which it is applied and legally reserved to the exclusive use of the maker, owner or seller. Trademarks are also registered and cannot be copied.
Trade Secret	Any type of business information which is commercially valuable, whether or not it has been patented, copyrighted, trademarked or otherwise protected, over which the contractor claims ownership and does not wish to have revealed.
Trail Boss	A high-level, highly trained and experienced acquisition executive formally designated by an agency to manage a major, mission-essential acquisition.

Trusted Computer System	A system that employs sufficient hardware and software integrity measures to allow its use for processing simultaneously a range of sensitive or classified information.
Turnkey Acquisition	An acquisition where a single (prime) contractor provides a complete system, including hardware, software, installation, shipping, etc. Typically a large acquisition, and at contracting, so complex that the elements can't be reasonably separated.
Unfinanced Requirement	funds are NOT set aside in the budget, regardless of the technical merits of the requirement.
Uniform Contract Format	A format for preparing solicitations and contracts prescribed in FAR 14.201-1 and 15.405-1.
Unlimited Data Rights	Unlimited legal rights to data. The Government can claim " <i>unlimited data rights</i> " for an item, component, or process developed as part of a contractor's or subcontractor's work on a Government project and developed exclusively with Government funds.
Unlimited Rights	Rights to use, duplicate, release, or disclose, technical data or computer software in whole or in part, in any manner and for any purpose whatsoever, and to have or permit others to do so (FAR 27.401).
Used Equipment	Equipment that has been previously installed. This term includes "reconditioned," "refurbished" or "remanufactured" equipment.
Utility Software	Software that performs those functions required to support the applications programs, such as code conversion, copying, disk management, backup, and archiving.
Vaporware	Commercial software which does not yet exist in a format fully developed for prototyping, testing, or sale/lease.
Voluntary standards	Standards developed by industry and trade associations, which have been adopted throughout a domestic industry or even internationally.

**Warner
Amendment**

Public Law 97-86, DoD Authorization Act (1982), commonly called the Warner Amendment, made the Brooks Act NOT applicable to certain DoD procurements of ADPE systems, components, and service.

By authority of the Warner Amendment, the Brooks Act does NOT apply when you are acquiring ADPE or services for:

- intelligence activities
- cryptological activities related to national security
- the command and control of military forces
- equipment that is an integral part of a weapon or weapon system
- an item critical to the direct fulfillment of military or intelligence missions, *excluding routine administrative and business applications such as payroll, finance, logistics, and personnel management applications.*

**Wide Area
Network
(WAN)**

A data communications network, covering a larger geographic area, in which the communications is carried, at least part of the way, between locations by telephone lines.

- A -

Acceptance Criteria:

- Ch. 05: 13
- Ch. 14: 12
- Ch. 38: 1, 3, 20-22
- Ch. 39: 20

Acceptance Plan:

- Ch. 08: 13
- Ch. 34: 12
- Ch. 38: 21
- Ch. 39: 10, 16
- Ch. 45: 13

Accessibility Requirements for Disabled:

- Ch. 13: 10
- Ch. 22: 9, 21-22

Accreditation:

- Ch. 19: 9, 20-21

Acquisition Life Cycle:

- Ch. 05: 2, 11
- Ch. 14: 13
- Ch. 24: 7
- Ch. 26: 7
- Ch. 28: 22
- Ch. 41: 8

Relationship of System Life Cycle and ~ :

- Ch. 05: 11

Acquisition Plan:

- Ch. 02: 24
- Ch. 03: 13, 18
- Ch. 05: 13-14
- Ch. 10: 7, 9
- Ch. 12: 31
- Ch. 14: 6, 13, 16
- Ch. 15: 22
- Ch. 17: 13-14
- Ch. 19: 4, 24-25
- Ch. 20: 3, 13, 16, 18, 22-23, 25
- Ch. 21: 11
- Ch. 25: 11-12
- Ch. 29: 7
- Ch. 30: 8
- Ch. 31: 4
- Ch. 34: 19
- Ch. 35: 1-15
- Ch. 36: 2-6, 18, 20-31
- Ch. 37: 14
- Ch. 38: 4-5, 8-9, 14, 21, 28
- Ch. 42: 6
- Ch. 43: 7
- Ch. 44: 10
- Ch. 45: 6

Decision Table for Developing an ~ :

- Ch. 35: 11

Format Outline for an ~ :

- Ch. 35: 12

Acquisition Planning

- Checklist for Price-Related Factors in ~ :

- Ch. 36: 31

Checklist for Special Factors in ~ :

- Ch. 36: 19

Acquisition Solicitation:

- Ch. 39: 3, 5-15

Section A:

- Ch. 39: 6, 8

Section B:

- Ch. 30: 10
- Ch. 39: 6, 8, 16

Section C:

- Ch. 19: 24
- Ch. 34: 11
- Ch. 39: 6, 9, 11, 16

Section D:

- Ch. 39: 6, 9

Section E:

- Ch. 34: 11
- Ch. 39: 6, 10, 16

Section F:

- Ch. 39: 6, 10, 16

Section G:

- Ch. 02: 22
- Ch. 39: 6, 11

Section H:

- Ch. 11: 22
- Ch. 39: 6, 11-12, 16

Section I:

- Ch. 19: 24
- Ch. 39: 6, 11-12

Section J:

- Ch. 19: 24
- Ch. 39: 6, 13, 16

Section K:

- Ch. 39: 6, 13-14, 16

Section L:

- Ch. 19: 24, 26
- Ch. 38: 29
- Ch. 39: 6, 14
- Ch. 40: 11

Section M:

- Ch. 19: 24, 26-27
- Ch. 38: 30
- Ch. 39: 6, 15
- Ch. 41: 5, 9

Acquisition Strategy (-ies)

Special Factors for ~ :

- Ch. 36: 4-5

Acquisition, Method of:

- Ch. 03: 10
- Ch. 11: 25
- Ch. 12: 2, 37
- Ch. 13: 22
- Ch. 14: 2, 12, 26
- Ch. 29: 12-14

Acquisition, Method of: (cont.)

- Ch. 31: 11-12
- Ch. 42: 11

Index

- ADP Protest Report:
 - Ch. 03: 23
 - Ch. 44: 4, 13
- ADPE:
 - Ch. 01: 11, 14, 17-19
 - Ch. 06: 3-4, 6-7, 10
 - Ch. 13: 7
 - Ch. 15: 5, 9
 - Ch. 20: 10
 - Ch. 29: 3, 22-23
 - Ch. 31: 10
 - Ch. 33: 6
 - Ch. 37: 5
- Advisory Opinion, Request for:
 - Ch. 04: 36
- Agency Procurement Request (APR):
 - Ch. 03: 15, 18-19
 - Ch. 06: 10
 - Ch. 21: 13
 - Ch. 22: 15
 - Ch. 25: 3, 5-7
 - Ch. 31: 17
 - Ch. 35: 7
 - Ch. 36: 8, 32
 - Ch. 37: 1-5, 8, 10-22
 - When to Submit an ~ (flowchart):
 - Ch. 37: 10-12
- Aggregating Requirements:
 - Ch. 22: 6, 9, 13, 16
 - Ch. 24: 19, 23
- Allocation:
 - Ch. 02: 13
 - Ch. 20: 8, 17
 - Ch. 31: 9
- Allotment:
 - Ch. 20: 17, 22
- American National Standards Institute:
 - Ch. 14: 21
 - Ch. 33: 7
 - Ch. 38: 18
- Analysis of Alternative, Reviewing an,:
 - Ch. 26: 28
 - Ch. 27: 1, 11-12, 21-22
- Analysis of Alternatives, Critiquing:
 - Ch. 27: 8
- Analysis of Alternatives:
 - Ch. 03: 12, 22
 - Ch. 12: 4, 17-18, 23-25, 28
 - Ch. 13: 21
 - Ch. 14: 26
 - Ch. 16: 18
 - Ch. 18: 4
 - Ch. 20: 12
 - Ch. 21: 5
 - Ch. 22: 3, 29
 - Ch. 24: 4, 28
 - Ch. 25: 6
 - Ch. 26: 1-22, 24, 28
 - Ch. 27: 1-23
 - Ch. 28: 3, 6, 19
 - Ch. 29: 4
 - Ch. 31: 1, 4, 13
 - Ch. 35: 2-3, 7-8, 10
 - Ch. 36: 16
 - Ch. 37: 16
 - Ch. 39: 20
- Analysis of Alternatives, Key Factors for Successful:
 - Ch. 12: 23
 - Ch. 26: 7
- Analysis of Alternatives, Steps in the:
 - Ch. 26: 8
- Analytic Modeling:
 - Ch. 05: 13
 - Ch. 08: 13, 15
- Anti-Deficiency Act (31 U.S.C. 1517):
 - Ch. 20: 5, 21-22
 - Ch. 29: 11
 - Ch. 31: 9
- Applicability Test:
 - Ch. 15: 9, 11, 13-14, 18-20
- Applications Software:
 - Ch. 06: 16-17
 - Ch. 12: 35
 - Ch. 18: 12
- Apportionment:
 - Ch. 20: 17, 21
- Appropriation:
 - Ch. 20: 2, 4, 17, 20-22
- Atomic Energy Act of 1954:
 - Ch. 19: 10, 12
- Augmentation:
 - Ch. 03: 13
 - Ch. 06: 10
 - Ch. 25: 8
 - Ch. 26: 6, 18
 - Ch. 36: 13-14
- Authorization:
 - Ch. 01: 14
 - Ch. 04: 12, 23, 26, 34, 38
 - Ch. 06: 11
 - Ch. 19: 21
 - Ch. 20: 17, 20-21
 - Ch. 31: 4, 7
 - Ch. 37: 17
 - Ch. 38: 5
- Automated Procurement Document System (ADPS):
 - Ch. 39: 7
- Automatic Data Processing Equipment (ADPE):
 - Ch. 01: 3, 10-11, 14, 17-19
 - Ch. 06: 3-4, 6-7, 10
 - Ch. 13: 7
 - Ch. 14: 6
 - Ch. 15: 5, 9
 - Ch. 20: 10
 - Ch. 29: 3, 22-23
 - Ch. 31: 10

Ch. 33: 6
Ch. 37: 5

– B –

BARS:

Ch. 01: 20
Ch. 30: 1-4, 6-8, 10-11
Ch. 35: 2-3
Ch. 42: 2

Benchmarking:

Ch. 03: 19
Ch. 06: 12
Ch. 08: 1, 4, 8, 13, 24
Ch. 16: 10
Ch. 34: 10
Ch. 38: 22
Ch. 41: 13

Benefit-Cost Analysis:

Ch. 02: 4, 8-12, 24
Ch. 20: 10, 18
Ch. 26: 3, 8, 13, 21
Ch. 27: 4, 12, 16, 19
Ch. 28: 1-10, 15, 19-27
Ch. 29: 3-4, 17
Ch. 36: 23
Ch. 37: 12
Ch. 42: 4

Benefit-Cost Ratio:

Ch. 28: 23-24, 26

Best and Final Offer (BAFO):

Ch. 35: 13
Ch. 38: 5, 27

Best Value:

Ch. 01: 1
Ch. 03: 6-7, 18
Ch. 06: 9
Ch. 17: 24
Ch. 18: 13, 16
Ch. 27: 19
Ch. 28: 7, 19, 25
Ch. 30: 6
Ch. 35: 9, 12
Ch. 38: 3, 13-15, 28
Ch. 41: 4
Ch. 42: 17
Ch. 44: 13-14

Beta Version Software:

Ch. 12: 3, 7-8, 22, 27

Bid Analysis and Reporting System (BARS):

Ch. 01: 20
Ch. 03: 15
Ch. 30: 1-4, 6-8, 10-11
Ch. 35: 2-3
Ch. 42: 2

Board of Contract Appeals (BCA):

Ch. 01: 8
Ch. 04: 25

Ch. 15: 9
Ch. 16: 11
Ch. 44: 6, 8

Brand Name Description:

Ch. 32: 5

Brand Name or Equal:

Ch. 12: 5
Ch. 23: 11, 13
Ch. 32: 2, 9, 15
Ch. 34: 6
Ch. 39: 9
Ch. 44: 14

Breakeven:

Ch. 28: 23-24, 26

Brooks Act of 1965:

Ch. 01: 9-11, 13-17, 22
Ch. 03: 19-20
Ch. 06: 3, 5-7
Ch. 13: 3, 7
Ch. 15: 9, 12, 21
Ch. 19: 13
Ch. 20: 21
Ch. 32: 14
Ch. 33: 3
Ch. 43: 7

Budget:

Ch. 01: 11, 13
Ch. 02: 1, 3-5, 8, 11, 24
Ch. 03: 21
Ch. 14: 34
Ch. 19: 10, 19, 33
Ch. 20: 1-3, 5, 8-11, 14-23, 26
Ch. 25: 9
Ch. 28: 3, 5, 7, 14-15, 26
Ch. 29: 6, 12, 21
Ch. 31: 4, 6, 9, 12, 14, 17
Ch. 36: 8
Ch. 37: 20-21

Budget Approval Process:

Ch. 20: 19

Bundling:

Ch. 06: 17
Ch. 17: 18
Ch. 36: 2, 4, 7, 18-19

Buy-in Pricing:

Ch. 36: 1, 3, 5, 20, 29, 31
Ch. 42: 15

– C –

Call Detail Report:

Ch. 14: 5

Capability Validation:

Ch. 06: 3, 9, 11
Ch. 08: 12, 17, 23
Ch. 45: 13

Index

- Carterfone Decision:
 - Ch. 13: 2, 4, 16, 18-19
- Cellular Telephone:
 - Ch. 06: 12
 - Ch. 07: 5, 8
 - Ch. 15: 7
 - Ch. 26: 12
- Central Office of Record:
 - Ch. 03: 17, 19
 - Ch. 14: 5
 - Ch. 34: 11
- Central Processing Unit (CPU):
 - Ch. 06: 14
 - Ch. 08: 15
- Centrally-managed Item:
 - Ch. 20: 17
- Centrex:
 - Ch. 06: 14, 18
 - Ch. 07: 5, 7-8
 - Ch. 08: 5
 - Ch. 14: 28
 - Ch. 15: 7
- Centrex Service:
 - Ch. 06: 14, 18
- Certification:
 - Ch. 04: 30, 38-40
 - Ch. 06: 11
 - Ch. 08: 9, 11-12, 15
 - Ch. 11: 8
 - Ch. 13: 13
 - Ch. 19: 9, 20-21
 - Ch. 23: 8
 - Ch. 34: 11
 - Ch. 38: 22-23
 - Ch. 39: 13-14
- CICA:
 - Ch. 01: 15
 - Ch. 22: 19
 - Ch. 44: 6
- Clarification:
 - Ch. 12: 8
 - Ch. 24: 25
 - Ch. 34: 17
 - Ch. 38: 5
 - Ch. 40: 4, 6
 - Ch. 41: 8-9
 - Ch. 42: 16
 - Ch. 43: 4
- Commerce Business Daily (CBD):
 - Ch. 01: 20
 - Ch. 04: 17
 - Ch. 16: 6
 - Ch. 22: 19
 - Ch. 23: 7
 - Ch. 29: 15
 - Ch. 38: 5
- Commercial Off-The-Shelf (COTS):
 - Ch. 05: 19
 - Ch. 08: 9-10
 - Ch. 14: 25
 - Ch. 17: 8-9, 13
 - Ch. 31: 7
 - Ch. 38: 9
 - Ch. 39: 18
- Commercial Software, Types of:
 - Ch. 12: 2-4, 11-13, 25
- Commercial Warranty:
 - Ch. 17: 21-22
- Commitment:
 - Ch. 02: 16
 - Ch. 12: 35
 - Ch. 20: 17
 - Ch. 37: 19
- Common Distributable Charge:
 - Ch. 14: 5
- Common-Use Software:
 - Ch. 06: 13, 17
 - Ch. 12: 5
 - Ch. 26: 26
 - Ch. 36: 30
- Communication Service Authorizations (CSA):
 - Ch. 14: 29
- Communications Security (COMSEC):
 - Ch. 06: 8, 11, 13
 - Ch. 13: 6
 - Ch. 14: 5, 14
 - Ch. 19: 9, 13
 - Ch. 31: 7
- Compatibility-Limited Justification:
 - Ch. 06: 8
 - Ch. 12: 20
 - Ch. 14: 32
 - Ch. 21: 7
 - Ch. 22: 8, 17
 - Ch. 23: 10, 13
 - Ch. 25: 9
 - Ch. 32: 11-13
- Compatibility-Limited Requirements:
 - Ch. 02: 10, 20
 - Ch. 03: 8, 16, 19-20
 - Ch. 04: 2, 13, 17, 26, 30, 40
 - Ch. 05: 1
 - Ch. 06: 8-9, 11, 13
 - Ch. 07: 5, 8-9
 - Ch. 08: 11, 14-15, 19
 - Ch. 09: 5
 - Ch. 10: 8
 - Ch. 11: 3, 21
 - Ch. 12: 8, 13, 17-18, 20-23, 25, 36
 - Ch. 14: 2-5, 8, 10, 12-20, 23, 31-35
 - Ch. 15: 1, 8, 19
 - Ch. 16: 2, 13-15, 17-19
 - Ch. 17: 4, 9, 14, 21
 - Ch. 18: 2-3, 8, 10-12, 14
 - Ch. 19: 1, 3-5, 14, 17, 19-20, 24-26, 29
 - Ch. 20: 8, 11, 17, 20

- Ch. 21: 2-8, 12-13
- Ch. 22: 9-11, 14-19, 21, 26, 28, 30
- Ch. 23: 1-13
- Ch. 24: 5-8, 14, 19-20, 23-25
- Ch. 25: 2-4, 6-7, 9-12
- Ch. 26: 12, 20-21, 24, 26
- Ch. 27: 5-6, 13-15, 20
- Ch. 29: 4, 7, 9, 14
- Ch. 30: 2, 5
- Ch. 31: 4-5, 7, 9-11, 13
- Ch. 32: 5, 11-13
- Ch. 33: 4-5, 7, 10, 14-15
- Ch. 34: 4, 6, 9, 13, 16
- Ch. 35: 1-3, 5, 7-8, 11
- Ch. 36: 11-12, 15, 17, 25-26, 28-29
- Ch. 37: 7, 12-14, 16, 20
- Ch. 38: 13, 16, 18, 20, 24, 26
- Ch. 39: 7, 10, 12, 18, 20
- Ch. 40: 4, 12
- Ch. 41: 5, 8, 12
- Ch. 44: 5
- Ch. 45: 3, 13, 16, 18-19
- Compatibility-Limited Specification:
 - Ch. 23: 6
 - Ch. 32: 5, 11, 13
- Competition in Contracting Act of 1984 (CICA):
 - Ch. 01: 9, 15-16
 - Ch. 13: 3, 7
 - Ch. 22: 19
 - Ch. 33: 8
 - Ch. 44: 4, 6
- Competing Contractor:
 - Ch. 04: 15, 17-19, 21-22, 24-26, 28-39
- Competition Requirements:
 - Ch. 03: 12
 - Ch. 22: 17
 - Ch. 23: 6, 9, 13
 - Ch. 36: 15
- Competitive Range:
 - Ch. 03: 7, 17, 19
 - Ch. 04: 20
 - Ch. 38: 5, 27
 - Ch. 40: 4-5
 - Ch. 41: 5, 9-10
 - Ch. 42: 17-19
 - Ch. 44: 5
- Computer Inquiry II:
 - Ch. 13: 2, 4, 16, 18
- Computer Publications:
 - Ch. 16: 8
- Computer Security Act:
 - Ch. 01: 9, 21-22
 - Ch. 13: 3, 7
 - Ch. 19: 2, 6, 10-11, 13, 18
 - Ch. 20: 5, 7-8
 - Ch. 22: 20
 - Ch. 33: 6
- Computer Security Act of 1987:
 - Ch. 01: 22
 - Ch. 13: 3, 7
 - Ch. 19: 2, 6, 10-11, 18
 - Ch. 20: 5, 7-8
 - Ch. 22: 20
 - Ch. 33: 6
- Computer Security Act of 1987:
 - Ch. 01: 21
- Computer Security Act of 1987:
 - Ch. 01: 9, 21-22
 - Ch. 13: 3, 7
 - Ch. 19: 2, 6, 10-11, 13, 18
 - Ch. 20: 5, 7-8
 - Ch. 22: 20
 - Ch. 33: 6
- COMSEC:
 - Ch. 06: 8, 11
 - Ch. 14: 5, 14
 - Ch. 19: 9, 13
 - Ch. 31: 7
- Consolidated Local Telecommunications Service:
 - Ch. 06: 8, 11
 - Ch. 13: 11
 - Ch. 14: 5, 25
 - Ch. 26: 14, 25
 - Ch. 27: 15, 21
- Contingency Requirements:
 - Ch. 22: 9, 23
 - Ch. 24: 23
- Contract Line Item Number (CLIN):
 - Ch. 39: 8
 - Ch. 42: 7, 10
- Contract Monitoring Plan:
 - Ch. 45: 9
- Contracting Officer (CO):
 - Ch. 03: 8, 14, 17-19, 22
 - Ch. 04: 19-25, 28-30, 32-33, 35-41
 - Ch. 05: 13-16
 - Ch. 07: 3
 - Ch. 08: 20-21
 - Ch. 09: 20, 22, 25
 - Ch. 11: 8-9, 11
 - Ch. 14: 13, 30
 - Ch. 15: 4
 - Ch. 16: 8, 11
 - Ch. 17: 22
 - Ch. 19: 5, 24
 - Ch. 21: 2-5, 11-14
 - Ch. 23: 6-8
 - Ch. 24: 11
 - Ch. 27: 10, 20
 - Ch. 29: 18, 22
 - Ch. 30: 5
 - Ch. 32: 14
 - Ch. 33: 14, 16
 - Ch. 34: 6, 11-12
 - Ch. 35: 5

- Ch. 37: 9
- Ch. 38: 7, 9-10, 28
- Ch. 39: 11, 14, 20
- Ch. 40: 6, 13
- Ch. 41: 3-4
- Ch. 43: 5, 7, 10
- Ch. 44: 3, 6, 9
- Ch. 45: 3-9, 18
- Contracting Officer's Representative (COR):
 - Ch. 03: 17, 19
 - Ch. 14: 5
 - Ch. 34: 11
- Contracting Officer's Technical Representative (COTR):
 - Ch. 03: 17, 19
 - Ch. 05: 13-15
 - Ch. 09: 20, 22, 24-25
 - Ch. 19: 32
 - Ch. 34: 11-12
 - Ch. 35: 12
 - Ch. 36: 28
 - Ch. 39: 11
 - Ch. 45: 3-16, 18-19
- Contractor-Furnished Property and Services:
 - Ch. 34: 11
- Conversion Study:
 - Ch. 03: 19
 - Ch. 08: 6, 8
 - Ch. 12: 5, 8, 18, 20, 23
 - Ch. 15: 7
 - Ch. 22: 17
 - Ch. 23: 14
 - Ch. 24: 3, 20
 - Ch. 25: 1-12
 - Ch. 26: 2, 6, 8, 12, 20-21
 - Ch. 27: 13
 - Ch. 28: 21
 - Ch. 32: 13
 - Ch. 35: 2-3, 7-8
 - Ch. 36: 12-14
 - Ch. 37: 12, 16
 - Ch. 39: 20
- Conversion Study, Decision Table for a:
 - Ch. 25: 12
- Copyright Act:
 - Ch. 01: 9, 21
 - Ch. 11: 5
- Copyright Act of 1980:
 - Ch. 01: 21
- Copyright Law:
 - Ch. 11: 5
- Cost Accounting, Cost Recovery, and Interagency Sharing of Information Technology Facilities:
 - Ch. 02: 6
- Cost Analysis:
 - Ch. 12: 26
 - Ch. 23: 7
 - Ch. 25: 7, 9
- Ch. 26: 10
- Ch. 27: 16
- Ch. 43: 10
- Cost Benefit Analysis:
 - Ch. 08: 1, 7-8
 - Ch. 10: 9
 - Ch. 14: 18
- Cost Effectiveness Analysis:
 - Ch. 02: 8-9
 - Ch. 28: 2, 4, 6-8, 26
- Cost of Money:
 - Ch. 17: 17
 - Ch. 28: 18
 - Ch. 29: 19
- Cost or Pricing Data:
 - Ch. 43: 4, 10
- Crimes and Criminal Procedure Act of 1948:
 - Ch. 01: 21
- Crimes and Criminal Procedures Act:
 - Ch. 01: 9, 21
- Customer Premises Equipment (CPE):
 - Ch. 06: 8, 11, 18
 - Ch. 10: 6
 - Ch. 14: 7
- Cutover:
 - Ch. 14: 12, 15-18
- Cutover Plan:
 - Ch. 14: 12, 15-17
- Cutover, Flash vs. Parallel:
 - Ch. 14: 15-17

– D –

- Data Encryption:
 - Ch. 15: 6
 - Ch. 19: 2, 9, 20
 - Ch. 33: 6
- Data Encryption Standard:
 - Ch. 19: 9
 - Ch. 33: 6
- Data Rights:
 - Ch. 02: 15
 - Ch. 09: 17, 19
 - Ch. 10: 13
 - Ch. 11: 1, 3, 11-13, 17-21, 23-25
 - Ch. 17: 23
 - Ch. 19: 12
 - Ch. 20: 25
 - Ch. 34: 11
 - Ch. 40: 3, 7-9
 - Ch. 42: 15
- Data Rights
 - Government Purpose License Rights (GPLR):
 - Ch. 11: 12, 14-15, 20, 24
 - Limited:
 - Ch. 11: 13, 15-16, 18
 - Ch. 39: 14, 16

Restricted:
 Ch. 11: 4, 16
 Unlimited:
 Ch. 11: 13-15, 17-18
 DD Form 428:
 Ch. 14: 29
 Dedicated Lines or Dedicated Access Lines (DAL):
 Ch. 13: 6
 Ch. 14: 11
 Defense Acquisition Improvement Act:
 Ch. 01: 9, 21-22
 Defense Acquisition Improvement Act of 1986:
 Ch. 01: 21
 Defense Contract Action Data System (DCADS):
 Ch. 45: 10
 Definitions Test:
 Ch. 15: 5-7
 Delegation of Acquisition Authority:
 Ch. 07: 9
 Delegations of Procurement Authority (DPA):
 Ch. 01: 7, 14
 Ch. 03: 12, 15, 19
 Ch. 06: 11
 Ch. 12: 30
 Ch. 14: 30
 Ch. 16: 11
 Ch. 21: 13
 Ch. 22: 15
 Ch. 25: 5, 7
 Ch. 27: 7
 Ch. 36: 2, 4, 7-8, 12, 19
 Ch. 37: 1-2, 4-5, 7-8, 14, 18, 21
 Ch. 43: 7
 Department of Defense Index of Specifications and Standards (DODISS):
 Ch. 32: 3, 5
 Ch. 41: 12
 Designated Senior Official (DSO):
 Ch. 03: 14, 18-19
 Ch. 06: 9, 11
 Ch. 14: 30, 32
 Ch. 15: 4
 Ch. 16: 14
 Ch. 18: 6
 Ch. 22: 18, 22
 Ch. 37: 4, 9-10, 12, 18-19
 Ch. 43: 8
 Design Specification:
 Ch. 32: 7
 Ch. 38: 18
 Deviation:
 Ch. 06: 9, 11
 Ch. 14: 30, 32-33
 Ch. 22: 22
 Ch. 33: 15
 Ch. 37: 18
 Ch. 41: 12

Digital Signature Technology (DST):
 Ch. 19: 20
 Disbursement:
 Ch. 20: 17
 Discount Factor:
 Ch. 28: 10, 13-14, 16, 26
 Discount Rate:
 Ch. 02: 8
 Ch. 03: 14
 Ch. 28: 6, 10-17, 22, 26-27
 Ch. 29: 19-20
 Ch. 42: 6-7
 Discount Rate, Calculating a:
 Ch. 28: 16-17
 Discounting:
 Ch. 02: 8, 12
 Ch. 03: 14
 Ch. 26: 3, 8, 13, 21
 Ch. 27: 19
 Ch. 28: 2, 4, 9-19, 22, 26
 Ch. 29: 1-3, 16, 19-20
 Discussion:
 Ch. 01: 4
 Ch. 02: 4
 Ch. 03: 7
 Ch. 04: 21, 26-30, 33-34, 36
 Ch. 05: 5, 15
 Ch. 07: 9
 Ch. 08: 4, 11-12, 19
 Ch. 11: 12, 19-20
 Ch. 12: 1, 3, 10, 31
 Ch. 13: 6, 8-9, 11
 Ch. 14: 6, 28
 Ch. 16: 5, 8
 Ch. 17: 3, 13, 24
 Ch. 18: 14-15
 Ch. 19: 8, 12, 24, 32
 Ch. 20: 24
 Ch. 22: 9, 27, 30
 Ch. 23: 6
 Ch. 25: 6
 Ch. 26: 27
 Ch. 33: 4, 10
 Ch. 36: 8-9, 30
 Ch. 37: 16-18
 Ch. 38: 5, 18, 21, 27
 Ch. 40: 1-9
 Ch. 41: 5, 10
 Ch. 42: 16-19
 Ch. 43: 4
 Ch. 44: 9
 What Is a Discussion?:
 Ch. 40: 5
 Dispute:
 Ch. 03: 17
 Ch. 09: 22
 Ch. 44: 6
 Ch. 45: 14

DoD Authorizations Act of 1982 (Warner Amendment):

- Ch. 01: 9, 14-15, 18
- Ch. 06: 6
- Ch. 13: 3, 7
- Ch. 15: 9, 12
- Ch. 19: 18
- Ch. 20: 21
- Ch. 37: 10
- Ch. 43: 7

DoD Standard 5200.28 Department of Defense Trusted Computer System Evaluation Criteria:

- Ch. 19: 6, 16

Down Time:

- Ch. 09: 11, 14, 22
- Ch. 45: 12

— E —

Economic Price Adjustment (EPA):

- Ch. 03: 8
- Ch. 22: 26
- Ch. 36: 25
- Ch. 37: 6
- Ch. 45: 16

Economic Price Adjustments:

- Ch. 36: 1, 3, 5, 20, 25, 31
- Ch. 42: 15
- Ch. 45: 16

Effectiveness Level:

- Ch. 38: 1, 3, 20, 24
- Ch. 40: 3, 7-8

Electronic Commerce (EC):

- Ch. 26: 17
- Ch. 39: 5

Electronic Data Interchange (EDI):

- Ch. 14: 8
- Ch. 26: 17
- Ch. 33: 7, 14
- Ch. 39: 5

Electronic Industries Association (EIA):

- Ch. 14: 21

Electronic Mail:

- Ch. 07: 5, 7
- Ch. 08: 5
- Ch. 12: 13
- Ch. 15: 7
- Ch. 19: 20
- Ch. 22: 24-25
- Ch. 26: 12

Embedded FIP Equipment:

- Ch. 06: 6, 14
- Ch. 15: 6, 14

Employee:

- Ch. 01: 20
- Ch. 04: 5, 8-9, 15, 17, 21-22, 26, 30-32, 36, 38-39
- Ch. 12: 34

- Ch. 16: 12

- Ch. 19: 29

- Ch. 20: 21

- Ch. 25: 7

- Ch. 27: 17

Energy Efficiency for Microcomputers:

- Ch. 22: 9

Energy Efficiency Requirements for Microcomputers:

- Ch. 22: 8, 25-26

Entire Agreement Clause:

- Ch. 11: 20

EPA Energy Star Program:

- Ch. 03: 8

Established Sources of Supply:

- Ch. 12: 29

Evaluation Criteria, Development of:

- Ch. 08: 10

Evaluation Factors:

- Ch. 02: 17
- Ch. 03: 6-7, 19
- Ch. 18: 15
- Ch. 19: 26
- Ch. 21: 13
- Ch. 35: 9, 12
- Ch. 38: 8, 10, 13-14, 16-17, 19, 24-30
- Ch. 39: 6, 15, 20
- Ch. 41: 3-5, 7-9, 12-14
- Ch. 43: 4
- Ch. 44: 5, 13

Evaluation Standards:

- Ch. 38: 27

Excess FIP Equipment:

- Ch. 06: 11
- Ch. 18: 6
- Ch. 26: 15, 26
- Ch. 27: 15, 21

Executive Order 12674:

- Ch. 04: 3, 5-6

Executive Order 12731:

- Ch. 04: 3, 5-6

Executive Order 12845:

- Ch. 03: 8
- Ch. 10: 11
- Ch. 22: 26

Exemptions Test:

- Ch. 15: 9-10

Expenditure:

- Ch. 01: 10
- Ch. 05: 6
- Ch. 06: 12
- Ch. 20: 17, 21
- Ch. 27: 10, 19
- Ch. 28: 7, 18
- Ch. 30: 6
- Ch. 31: 8
- Ch. 45: 11

Expense/Investment Criteria:

- Ch. 20: 17

– F –

Facsimile Services:

Ch. 07: 8

FAR (*see Federal Acquisition Regulation*)

Federal Acquisition Regulation (FAR):

Ch. 01: 4, 7, 12, 15, 17, 22

Ch. 02: 1, 6

Ch. 03: 1, 3-12, 21-22

Ch. 04: 3, 14, 17-21, 23, 25-26, 30-33, 35-36, 38-41

Ch. 06: 1, 8-9, 21

Ch. 07: 3

Ch. 08: 18-20

Ch. 09: 25

Ch. 10: 3, 7, 9, 11-12

Ch. 11: 3-4, 10-11, 14-17, 20-21

Ch. 12: 4, 19, 30

Ch. 13: 1-3, 5, 9-10, 16

Ch. 14: 24, 32-33

Ch. 15: 1

Ch. 16: 3, 9-10, 13

Ch. 17: 24

Ch. 19: 22

Ch. 20: 5, 11, 23-25

Ch. 21: 4-5, 7

Ch. 22: 3, 5-6, 12, 17-20, 26, 31

Ch. 23: 1-9, 13-14

Ch. 24: 19-20

Ch. 26: 24

Ch. 28: 21

Ch. 29: 3-4, 7-10, 17, 22-23

Ch. 30: 4-5

Ch. 31: 1, 5

Ch. 32: 3, 5, 9, 13

Ch. 35: 3, 5, 12

Ch. 36: 6, 10-11, 15, 20-23

Ch. 37: 14

Ch. 38: 3-4, 7-8, 14, 20

Ch. 39: 4, 7-15

Ch. 40: 3-5, 8, 10-11, 14

Ch. 41: 5, 12-13

Ch. 42: 3, 9, 13, 16-18

Ch. 43: 1, 7-9

Ch. 44: 3-4, 6, 8

Ch. 45: 19

Federal ADP and Telecommunications Standards

Index:

Ch. 03: 23

Ch. 08: 4, 8, 23

Ch. 13: 11-12

Ch. 32: 15

Ch. 33: 1-2, 4, 8, 10-13, 16, 18

Ch. 34: 9

Ch. 39: 13, 17

Federal Agency Responsibilities for Maintaining Records About Individuals,:

Ch. 02: 6

Ch. 22: 20

Federal Information Processing Resources:

Ch. 01: 1, 4-6

Ch. 02: 5

Ch. 06: 10, 12

Federal Information Processing Standards

Publications (FIPS PUBS):

Ch. 01: 11

Ch. 03: 20

Ch. 08: 2-4, 8, 23-24

Ch. 12: 4, 8

Ch. 13: 4

Ch. 14: 21

Ch. 16: 10

Ch. 19: 4, 24

Ch. 33: 6, 9, 15

Federal Information Resources Management

Regulation:

Ch. 01: 3-4, 7, 12, 17, 19, 22

Ch. 02: 6-7, 12

Ch. 03: 1, 3-5, 11-15, 18, 21-22

Ch. 05: 4-8

Ch. 06: 1, 4-14, 17-18

Ch. 07: 2-7, 9

Ch. 08: 4-6, 8, 11-12, 19, 23

Ch. 09: 4-5, 8

Ch. 10: 3-4, 6-8, 11-12

Ch. 11: 17

Ch. 12: 4, 7

Ch. 13: 2-3, 5-6, 10-14, 16, 21

Ch. 14: 3, 5-7, 13-14, 17-19, 25, 27-28, 30, 32-34, 36

Ch. 15: 1-5, 8-9, 11-22

Ch. 16: 9-10, 12

Ch. 17: 3, 8-9, 24

Ch. 18: 2-8, 10-11

Ch. 19: 2, 4, 6, 9, 15

Ch. 20: 4-5, 7-9, 11-12, 16

Ch. 21: 3-5, 7-10, 12

Ch. 22: 1, 3, 5-28, 30-31

Ch. 23: 2-3, 5-6, 9-12, 14

Ch. 24: 3-4, 10, 13-15, 17-24

Ch. 25: 4-5, 7-8

Ch. 26: 4-6, 14-15, 17-19, 23-26

Ch. 27: 4-5, 9, 11, 13, 15, 19

Ch. 28: 3, 5-6, 18-19, 25

Ch. 29: 4, 9

Ch. 30: 4-6, 9

Ch. 31: 3, 12, 17, 19

Ch. 32: 2-3, 5-7, 11-13

Ch. 33: 4-8, 15

Ch. 35: 3, 5, 7-8

Ch. 36: 6, 8-16, 24, 32

Ch. 37: 2-5, 7-10, 12, 14-17, 19-22

Ch. 38: 3

Ch. 39: 4, 17, 20

Ch. 41: 5

Ch. 42: 3, 14

- Ch. 43: 7-8
- Ch. 44: 3-4, 6
- Federal Manager's Financial Integrity Act:
 - Ch. 19: 6
- Federal Property and Administrative Services Act of 1949:
 - Ch. 01: 9-10, 15-17, 22
 - Ch. 02: 5
 - Ch. 19: 6
 - Ch. 26: 25
- Federal Register:
 - Ch. 22: 25
 - Ch. 33: 4
- Federal Security Telephone Service (FSTS):
 - Ch. 13: 11, 21
 - Ch. 14: 5, 25, 27-28, 35
 - Ch. 26: 15, 26
 - Ch. 27: 15
- Federal Software Management Center:
 - Ch. 25: 10-11
- Federal Telecommunications Standards (FED-STDS):
 - Ch. 13: 5, 10
 - Ch. 14: 6, 13, 21, 33, 35
 - Ch. 33: 3-4, 6, 10-11, 15, 17
- Federal Telecommunications System (FTS):
 - Ch. 03: 12, 15
 - Ch. 06: 8, 11, 18
 - Ch. 07: 5, 8-9
 - Ch. 08: 23-24
 - Ch. 09: 3, 20
 - Ch. 12: 29
 - Ch. 13: 8, 13
 - Ch. 14: 6, 19
 - Ch. 16: 11
 - Ch. 17: 8
 - Ch. 21: 10
 - Ch. 26: 25
 - Ch. 31: 19
 - Ch. 37: 10
 - Ch. 39: 19
- FEDLINK:
 - Ch. 16: 12
- FEDSIM:
 - Ch. 08: 4, 24
 - Ch. 16: 12
 - Ch. 20: 3
- FEDWORLD:
 - Ch. 16: 10
- Federal Acquisition Process
 - Phases of the ~:
 - Ch. 38: 5
- File Security:
 - Ch. 19: 9
- Financed Requirement:
 - Ch. 20: 11, 20
 - Ch. 31: 4
 - Ch. 39: 18
- Financed Versus Unfinanced Requirements:
 - Ch. 31: 4
- Financial Management Systems:
 - Ch. 02: 4, 18, 24
 - Ch. 20: 9, 18
 - Ch. 26: 14, 25
 - Ch. 27: 15
 - Ch. 37: 6
- Financial Systems:
 - Ch. 02: 18
 - Ch. 10: 5
- FIP Resource Acquisition Team:
 - Ch. 21: 2, 4, 11-14
- FIP Resource Requirements Analysis:
 - Ch. 01: 12, 22
 - Ch. 03: 12, 22
 - Ch. 05: 5
 - Ch. 07: 8
 - Ch. 08: 7
 - Ch. 09: 3, 7, 13
 - Ch. 12: 4, 8, 17, 22-23
 - Ch. 14: 12-16, 26, 32-33
 - Ch. 19: 4-5, 15, 25
 - Ch. 20: 6, 12, 26
 - Ch. 21: 1-12, 14-15
 - Ch. 22: 1-3, 5-11, 13, 19, 21-31
 - Ch. 23: 6, 10, 12-13
 - Ch. 24: 1-28
 - Ch. 25: 6, 13
 - Ch. 26: 1-5, 7-13, 20-22, 28
 - Ch. 27: 10, 13, 21
 - Ch. 31: 4, 13
 - Ch. 32: 11, 13
 - Ch. 35: 1-3, 7-9
 - Ch. 37: 12, 16-17
 - Ch. 39: 20
- FIP Services
 - Eight Types of ~ :
 - Ch. 07: 5
- FIP Support Services:
 - Ch. 01: 3
 - Ch. 03: 6-7
 - Ch. 06: 6-7, 10, 21
 - Ch. 07: 2-5, 11
 - Ch. 08: 1-12, 16-21, 25, 28
 - Ch. 09: 1-3, 5-7
 - Ch. 15: 7
 - Ch. 22: 29
 - Ch. 23: 8
 - Ch. 24: 15
 - Ch. 26: 19
 - Ch. 31: 6, 9-10
 - Ch. 35: 5
 - Ch. 36: 16
 - Ch. 37: 15
 - Ch. 42: 10, 15-16
 - Ch. 45: 12

- FIPS Pub 151:
 Ch. 12: 33
 Ch. 14: 22
- FIPS Pubs:
 Ch. 01: 11
 Ch. 03: 20
 Ch. 08: 2-4, 8, 23-24
 Ch. 12: 4, 8
 Ch. 13: 4
 Ch. 14: 21
 Ch. 19: 4, 24
 Ch. 33: 6, 9, 15
- FIRMR (see *Federal Information Resources Management Regulation*)
- Firmware:
 Ch. 01: 18
 Ch. 06: 10, 14
 Ch. 15: 6
 Ch. 36: 13
- FMSS (Financial Management System Software):
 Ch. 02: 18
 Ch. 03: 12
 Ch. 12: 29
 Ch. 26: 14, 25, 27
 Ch. 27: 15, 21
 Ch. 37: 6
- Follow-On Requirements:
 Ch. 23: 8
- Follow-On Requirements, Justification for:
 Ch. 01: 11-12, 15-16, 22
 Ch. 02: 6-7, 13-14, 17-18, 21, 24
 Ch. 03: 6, 8, 10, 12, 19, 22
 Ch. 04: 3, 10, 14, 16, 20, 38-41
 Ch. 05: 5, 13-14, 18
 Ch. 06: 6, 8-9, 11-13, 15, 17, 19, 21
 Ch. 07: 4, 6-8, 10
 Ch. 08: 6-9, 11-12, 14-16, 21, 25-26
 Ch. 09: 3, 7-8, 13, 17-18, 22
 Ch. 10: 9, 11
 Ch. 11: 4, 11, 13, 17, 19, 21-22, 24
 Ch. 12: 4-5, 8, 12-13, 17-25, 28, 30, 37
 Ch. 13: 2-3, 7, 10, 13-15, 21-22
 Ch. 14: 3, 5, 7, 11-16, 18-19, 20, 24-30, 32-34
 Ch. 15: 1, 4, 7-8, 14, 19-21
 Ch. 16: 9, 13-15, 17
 Ch. 17: 4, 8-9, 11-13, 18, 20
 Ch. 18: 9-10, 15
 Ch. 19: 1-2, 4-7, 9, 11, 15-29, 31-33
 Ch. 20: 1-2, 4, 6-9, 11-16, 18, 20, 23-26
 Ch. 21: 1-15
 Ch. 22: 1-31
 Ch. 23: 2-3, 5-6, 8-14
 Ch. 24: 1-28
 Ch. 25: 6-7, 13
 Ch. 26: 1-5, 7-15, 17-18, 20-22, 25-26, 28
 Ch. 27: 1, 3, 5, 7-11, 13, 15-17, 19, 21
 Ch. 28: 2, 4-6, 18-19
 Ch. 29: 2-10, 12, 22
 Ch. 30: 7
 Ch. 31: 1, 4-13
 Ch. 32: 2-6, 9, 11-15
 Ch. 33: 1, 3, 5, 8, 14
 Ch. 34: 3-4, 6-7, 9, 13
 Ch. 35: 1-3, 5, 7-11, 13
 Ch. 36: 2-5, 7, 9, 15, 17-20, 27-28, 30-31
 Ch. 37: 6-7, 12, 14, 16-17, 20
 Ch. 38: 4-5, 7-9, 13, 16-18, 20-21, 29
 Ch. 39: 6, 8-11, 14, 16, 20
 Ch. 40: 4, 8-9
 Ch. 41: 1-5, 7, 11-12, 15
 Ch. 42: 4, 13, 16
 Ch. 43: 6-7, 9
 Ch. 45: 2-4, 10, 15-16, 18-19
- Freedom of Information Act (FOIA):
 Ch. 04: 3, 7
 Ch. 16: 10
 Ch. 19: 11, 13, 19, 25
- FTS2000:
 Ch. 03: 12, 15
 Ch. 06: 11, 18
 Ch. 07: 3, 5, 7-9
 Ch. 09: 20
 Ch. 12: 29
 Ch. 13: 5, 10-11, 13-15, 21
 Ch. 14: 6, 13, 18-19, 23, 25, 27-28, 32, 34
 Ch. 16: 11-12
 Ch. 17: 8, 16
 Ch. 26: 1, 4, 10, 14, 18, 25
 Ch. 27: 15, 21
 Ch. 31: 19
 Ch. 35: 8
 Ch. 37: 5-7
- FTS2000 Policy:
 Ch. 13: 14
- Full and Open Competition:
 Ch. 01: 7, 15-16
 Ch. 06: 8-9
 Ch. 12: 18-20, 25
 Ch. 13: 7
 Ch. 20: 25
 Ch. 22: 5-6, 9, 12-13, 15, 17-18, 31
 Ch. 23: 2-9, 13-14
 Ch. 24: 16, 19, 23
 Ch. 32: 5
 Ch. 33: 8
 Ch. 36: 2, 4, 7-9, 15, 19
 Ch. 37: 14, 17, 21
 Ch. 39: 20
- Full and Open Competition, Exceptions to:
 Ch. 01: 16
 Ch. 23: 5-6, 13
- Full and Open Competition, Requirement for:
 Ch. 23: 4

Index

Functional and Performance Needs:

Ch. 22: 9
Ch. 24: 23

Functional Specification:

Ch. 23: 12
Ch. 32: 6

Fund Cite:

Ch. 20: 17

Funded vs. Unfunded Requirement:

Ch. 20: 20
Ch. 31: 4-5, 9, 11, 13

– G –

General Accounting Office (GAO):

Ch. 01: 16
Ch. 16: 11
Ch. 44: 1-4, 6-8, 10-11, 15

General Contract Clauses:

Ch. 11: 3, 20

General Services Board of Contract Appeals (GSBCA):

Ch. 01: 8, 14, 16, 18-19
Ch. 03: 23
Ch. 15: 9, 21
Ch. 16: 11
Ch. 43: 11
Ch. 44: 1-4, 6-14, 16

GOSIP:

Ch. 14: 3, 21-22

Government Open Systems Interconnection Profile (GOSIP):

Ch. 14: 3, 21-22

Government Performance and Results Act of 1993, P.L. 103-62:

Ch. 20: 5, 7, 15
Ch. 22: 14

Government-Furnished Equipment:

Ch. 34: 10
Ch. 45: 3

Government-Furnished Facilities and Services:

Ch. 34: 10

Government Property:

Ch. 03: 12
Ch. 04: 12
Ch. 24: 20

Government Furnished Property:

Ch. 20: 25
Ch. 35: 12
Ch. 36: 1, 3, 5, 20, 24, 31
Ch. 39: 20
Ch. 42: 15

Government Furnished Services:

Ch. 14: 6

Gratuity:

Ch. 01: 20
Ch. 04: 10, 18, 21, 37

Greatest Value Approach:

Ch. 03: 7

Ch. 17: 24

Ch. 38: 15

Ch. 41: 3-5, 10, 12

GSA Index of Federal Specifications, Standards and Commercial Item Descriptions:

Ch. 32: 3, 5

Ch. 41: 12

GSA Nonmandatory Multiple Award Schedule (MAS Schedule):

Ch. 02: 18

Ch. 03: 12

Ch. 16: 11

Ch. 22: 19

Ch. 26: 1, 5, 14, 16, 25, 27

Ch. 27: 15, 21

Ch. 36: 18

Ch. 37: 6

GSA Nonmandatory Schedule Licensing:

Ch. 11: 21

GSA's Bulletin Board System:

Ch. 26: 5

Guide for Acquiring Information Processing Support Services:

Ch. 03: 22

Guide for Acquiring Maintenance Services:

Ch. 03: 22

Ch. 09: 4

Ch. 22: 29

Ch. 26: 19

Guide for Acquiring Systems Integration Services:

Ch. 03: 22

Ch. 20: 6

Ch. 22: 29

Ch. 26: 19

Guide for Contracting Officer's Technical Representatives:

Ch. 03: 22

Guide for Requirements Analysis and Analysis of Alternatives:

Ch. 03: 22

Ch. 12: 4

Ch. 22: 3, 29

Ch. 24: 4

Ch. 26: 4

Guide for Using Gsa's Schedule Contracts for FIP Resources:

Ch. 03: 22

– H –

Head of the Contracting Activity:

Ch. 04: 28-30, 41

Ch. 23: 5

– I –

Implementation Plan:

Ch. 08: 13
Ch. 14: 15
Ch. 22: 29

Incidental Use:

Ch. 06: 6, 12
Ch. 15: 14

In-House Development:

Ch. 26: 12

Information Accessibility:

Ch. 13: 12
Ch. 14: 6
Ch. 20: 8
Ch. 21: 10
Ch. 22: 22
Ch. 32: 6

Information Needs:

Ch. 03: 3
Ch. 22: 5, 8-11, 25
Ch. 24: 15-18, 23

Information Resources Management (IRM):

Ch. 01: 7, 19
Ch. 03: 1, 3, 11, 15, 17, 19-20, 22-23
Ch. 06: 5, 11-12
Ch. 08: 10
Ch. 13: 12, 20
Ch. 14: 13-14
Ch. 15: 5
Ch. 20: 3, 5-7, 13, 16, 23
Ch. 21: 11-14
Ch. 22: 3, 14, 16, 29
Ch. 24: 10-11
Ch. 26: 19
Ch. 27: 9
Ch. 29: 3
Ch. 30: 4
Ch. 37: 6, 9-10, 12

Information Resources Requirements:

Ch. 22: 2, 4, 8-30

Information System Security (INFOSEC):

Ch. 13: 11, 13
Ch. 14: 6, 14, 18, 25, 28, 35
Ch. 19: 7, 9
Ch. 26: 4, 15, 26
Ch. 27: 15

Information Technology Fund (ITF):

Ch. 01: 19
Ch. 31: 1-3, 7-8, 16
Ch. 38: 19

Integrators (System Integrators):

Ch. 06: 19-20

Intellectual Property, Types of:

Ch. 10: 13
Ch. 11: 2, 10, 25

Intercity:

Ch. 06: 18

Ch. 14: 6, 10, 24

Ch. 27: 15

Interoperability:

Ch. 03: 16
Ch. 06: 12
Ch. 17: 24

Invitation for Bid (IFB):

Ch. 39: 5
Ch. 44: 14

– L –

Lease or Purchase Planning:

Ch. 29: 7

Lease to Ownership Plan (LTOP):

Ch. 14: 20
Ch. 29: 6, 9, 11-13, 17-18, 20-21
Ch. 30: 1, 7, 11
Ch. 31: 11-12
Ch. 42: 10-11

Lease vs. Purchase Minimum Factors to Consider:

Ch. 36: 21

Lease with Option to Purchase (LWOP):

Ch. 14: 20
Ch. 25: 5
Ch. 29: 6, 8, 11, 13, 21
Ch. 30: 1, 7, 9, 11
Ch. 31: 10-11
Ch. 36: 21-22
Ch. 42: 9, 11

Lease-Purchase Analysis:

Ch. 02: 8, 10-12
Ch. 28: 6, 15, 19, 28
Ch. 29: 1-12, 15-22, 24
Ch. 30: 1
Ch. 36: 23
Ch. 42: 4

LEXIS:

Ch. 16: 3, 11

Licensing Agreements, Types of:

Ch. 11: 2-3, 19-24

Liquidated Damages:

Ch. 09: 21, 24-25
Ch. 39: 7, 10, 12, 16
Ch. 45: 12

Live Test Demonstration (LTD):

Ch. 08: 1, 9-10
Ch. 39: 14

Live Testing:

Ch. 08: 9, 13-14

Local Area Network (LAN):

Ch. 03: 5
Ch. 08: 17
Ch. 09: 9
Ch. 10: 5-6
Ch. 12: 32
Ch. 14: 2-4, 9
Ch. 17: 6, 9

Index

Ch. 19: 20
Ch. 23: 10
Ch. 25: 7-8
Ch. 26: 11
Ch. 27: 13
Ch. 31: 5-6, 16
Ch. 34: 15
Ch. 36: 27-28
Ch. 37: 14
Local Batch Processing:
Ch. 07: 5-7
Ch. 08: 5
Ch. 15: 7
Local Network:
Ch. 14: 7
Local Service Area:
Ch. 14: 6-7
Long Haul Lines:
Ch. 14: 10
Lowest Overall Cost:
Ch. 05: 5-7, 10
Ch. 06: 9, 12
Ch. 28: 18
Ch. 30: 5-7
Ch. 42: 10
Lowest Overall Cost, Definition of:
Ch. 05: 6
Lowest Price - Technically Acceptable Proposal:
Ch. 38: 13

– M –

Maintenance Downtime Credits:
Ch. 45: 12
Maintenance Services:
Ch. 03: 22
Ch. 05: 15
Ch. 06: 7
Ch. 08: 1, 6, 11, 28
Ch. 09: 1-27
Ch. 18: 7
Ch. 22: 29
Ch. 23: 8
Ch. 26: 19
Ch. 30: 9
Ch. 31: 9, 14
Ch. 34: 14-15
Ch. 36: 16-17, 25
Major Information System Initiatives:
Ch. 02: 24
Ch. 20: 10, 18
Ch. 28: 5
Major System:
Ch. 01: 16
Ch. 02: 4, 13-17
Ch. 03: 10
Ch. 04: 10
Ch. 11: 17

Ch. 13: 4, 9
Ch. 31: 16
Ch. 38: 3
Mandatory for Consideration Programs:
Ch. 13: 11
Ch. 14: 19-20, 25
Ch. 17: 9
Ch. 26: 14-16, 18, 26
Ch. 27: 15, 21
Mandatory-For-Use Programs:
Ch. 13: 11
Ch. 14: 19-20, 25
Ch. 26: 14, 18, 23, 25
Ch. 27: 15, 21
Market Research:
Ch. 01: 16
Ch. 06: 19, 21
Ch. 14: 13
Ch. 15: 22
Ch. 16: 1, 3, 5-9, 13-18
Ch. 17: 1-4, 8-13, 15, 19, 22
Ch. 18: 4, 9-11, 13
Ch. 20: 25
Ch. 23: 6, 12-13
Ch. 26: 10, 17, 27
Ch. 28: 19, 22
Ch. 29: 15
Ch. 32: 1
Ch. 35: 1, 8
Ch. 36: 15, 29
Ch. 42: 13, 17
Market Research, Procedure for:
Ch. 16: 13-18
Market Survey:
Ch. 12: 19, 25-26
Ch. 16: 6, 15
Ch. 23: 7
Ch. 26: 10, 18
Ch. 27: 4, 14, 21
Ch. 35: 2-3, 7-9, 12
Ch. 43: 7
Ch. 44: 14
Microcomputer
Energy Efficiency Requirements:
Ch. 22: 8, 25-26
Mission Need:
Ch. 02: 13, 16
Ch. 22: 9, 13-14
Modified Final Judgment (MFJ):
Ch. 13: 2, 4, 16-18, 20
Modular Design:
Ch. 09: 12-13
Monitoring for Liquidated Damages:
Ch. 45: 12
Most Advantageous Alternative:
Ch. 05: 5-7
Ch. 06: 9, 12
Ch. 12: 30-31

Ch. 14: 20, 33
 Ch. 18: 10
 Ch. 26: 1-2, 6, 8, 13-15, 24, 26
 Ch. 27: 3, 6-7, 12-13, 15, 19-20, 22-23
 Ch. 28: 9, 25
 Ch. 29: 21
 Ch. 30: 3, 6
 Ch. 35: 11
 Ch. 36: 9
 Most Advantageous Alternative, Definition of:
 Ch. 05: 7
 Multiple Award Schedule Buys:
 Ch. 22: 19
 Multiple Award Schedule Buys, Exception to
 Justification for Certain:
 Ch. 22: 19
 Multiple Use Lines:
 Ch. 14: 11
 Multiyear Contracts:
 Ch. 13: 11
 Ch. 31: 2-3, 17-19

– N –

National Communication System (NCS):
 Ch. 33: 3
 National Institute of Standards and Technology
 (NIST):
 Ch. 01: 11, 22
 Ch. 03: 1-4, 20
 Ch. 08: 4, 24
 Ch. 12: 8
 Ch. 13: 21
 Ch. 16: 10
 Ch. 17: 24
 Ch. 19: 10, 20
 Ch. 22: 20
 Ch. 33: 3, 6, 8-9, 16
 National Security and Emergency Preparedness
 (NSEP):
 Ch. 07: 5, 7
 Ch. 13: 13-14
 Ch. 14: 25, 27, 34
 Ch. 19: 9
 Ch. 20: 16
 Ch. 22: 5
 Ch. 26: 4, 14, 25
 Ch. 27: 15, 21
 National Security Decision Directive 145 (NSDD
 145):
 Ch. 19: 6, 18
 Negotiated Procurement:
 Ch. 01: 15
 Ch. 03: 13
 Ch. 12: 8, 30
 Ch. 35: 10-12
 Net Present Value (NPV):
 Ch. 02: 8

 Ch. 28: 23, 27
 Network:
 Ch. 03: 5
 Ch. 06: 13-15
 Ch. 08: 6
 Ch. 09: 20
 Ch. 10: 5-6
 Ch. 12: 32, 34
 Ch. 13: 5, 11, 14-15, 17
 Ch. 14: 6-7, 9, 19, 22-23
 Ch. 15: 7
 Ch. 17: 10
 Ch. 19: 7, 20
 Ch. 23: 10
 Ch. 24: 13
 Ch. 26: 12, 14, 17, 25
 Ch. 27: 13, 15, 21
 Ch. 31: 16
 Ch. 34: 15, 17
 Ch. 35: 8
 Ch. 36: 24
 Ch. 37: 14, 16
 Ch. 38: 23
 Ch. 41: 8
 Ch. 44: 14
 Ch. 45: 9

New Equipment:
 Ch. 09: 15
 Ch. 10: 7-9, 11-12
 Ch. 16: 9
 Ch. 24: 27
 Ch. 36: 11, 28
 Ch. 43: 8

NEXIS:
 Ch. 16: 3, 11

NIST:
 Ch. 01: 11, 22
 Ch. 03: 2-3, 20
 Ch. 08: 4, 24
 Ch. 12: 8
 Ch. 13: 21
 Ch. 16: 10
 Ch. 17: 24
 Ch. 19: 10
 Ch. 22: 20
 Ch. 33: 3, 6, 8-9, 16

Nominal Discount Rate:
 Ch. 28: 27
 Ch. 29: 20

Non-Appropriated Funds:
 Ch. 31: 5, 8

Noncompetitive Justification Requirement:
 Ch. 21: 7

Nondisclosure Clauses:
 Ch. 11: 20

Nonmandatory Programs:
 Ch. 26: 16
 Ch. 27: 13, 16, 21

– O –

Obligation of Funds:

Ch. 31: 4-10

Obsolescence:

Ch. 05: 1, 8, 16

Ch. 06: 12

Ch. 09: 8

Ch. 17: 15-19, 25

Ch. 18: 1-10, 12-17

Ch. 27: 17

Ch. 29: 7-8

Ch. 31: 15

Ch. 32: 1

Ch. 36: 4, 16, 19, 21

Obsolescence, Determining:

Ch. 18: 7

Obsolete Items, Requests for:

Ch. 18: 10

Office of Federal Procurement Policy (OFPP):

Ch. 01: 9, 15-16, 20

Ch. 02: 17

Ch. 03: 3-9, 21

Ch. 04: 3, 14

Ch. 22: 16, 26

Ch. 43: 9

Office of Federal Procurement Policy Act:

Ch. 01: 9, 15-16, 20

Ch. 04: 3, 14

Office of Federal Procurement Policy Act:

Ch. 01: 9, 15-16, 20

Ch. 04: 3, 14

Office of Government Ethics:

Ch. 04: 3, 11-12

Office of Management and Budget:

Ch. 01: 7, 11-13, 19-20, 22-23

Ch. 02: 1-25

Ch. 03: 1, 3, 5-7, 9-10, 14, 21

Ch. 04: 16

Ch. 05: 7

Ch. 06: 1

Ch. 08: 4, 26

Ch. 12: 37

Ch. 13: 2-5, 7, 9, 13, 22

Ch. 14: 13

Ch. 16: 10

Ch. 19: 2, 4-6, 10-11, 13-15

Ch. 20: 2, 5, 7, 9-11, 15, 18, 20, 25

Ch. 21: 4, 14

Ch. 22: 10, 20

Ch. 24: 18

Ch. 26: 24

Ch. 28: 3, 5-8, 14-16, 18-19, 22, 26-27

Ch. 29: 3-6, 17, 19

Ch. 30: 4, 9

Ch. 31: 12, 17

Ch. 32: 3

Ch. 35: 3, 5

Ch. 36: 6, 20, 23

Ch. 37: 21

Ch. 38: 3

Ch. 42: 4, 6

Ch. 43: 9

Office of Technical Assistance (OTA):

Ch. 08: 24

Ch. 09: 3

Ch. 12: 29

Ch. 16: 12

Ch. 20: 6

Ch. 21: 14

Ch. 22: 3, 20, 24

Ch. 26: 16

Ch. 31: 16

Ch. 35: 5

Ch. 38: 19

Office of the Secretary of Defense:

Ch. 01: 13

Ch. 20: 20

Ch. 31: 12

Ch. 37: 6

OFPP Pamphlet No. 1:

Ch. 02: 17

OFPP Policy Letter 91-2, Service Contracting:

Ch. 03: 5-6

OFPP Policy Letter 92-1, Inherently Governmental Functions:

Ch. 03: 5, 7

OFPP Policy Letter 92-4, Procurement of Environmentally-Sound and Energy-Efficient Products and Services:

Ch. 03: 5

Ch. 22: 26

OFPP Policy Letter 92-5, Past Performance

Information:

Ch. 03: 5, 8

OFPP Policy Letter 93-1, Management Oversight of Service Contracting:

Ch. 03: 5, 9

OFPP Policy Letters:

Ch. 03: 4-6

OMB:

Ch. 01: 7, 11-13, 19-20, 22-23

Ch. 02: 1-25

Ch. 03: 1, 3, 5-7, 9-10, 14, 21

Ch. 04: 16

Ch. 05: 7

Ch. 06: 1

Ch. 08: 4, 26

Ch. 12: 37

Ch. 13: 2-5, 7, 9, 13, 22

Ch. 14: 13

Ch. 16: 10

Ch. 19: 2, 4-6, 10-11, 13-15

Ch. 20: 2, 5, 7, 9-11, 15, 18, 20, 25

Ch. 21: 4, 14

Ch. 22: 10, 20

- Ch. 24: 18
- Ch. 26: 24
- Ch. 28: 3, 5-8, 14-16, 18-19, 22, 26-27
- Ch. 29: 3-6, 17, 19
- Ch. 30: 4, 9
- Ch. 31: 12, 17
- Ch. 32: 3
- Ch. 35: 3, 5
- Ch. 36: 6, 20, 23
- Ch. 37: 21
- Ch. 38: 3
- Ch. 42: 4, 6
- Ch. 43: 9
- OMB Circular A-109, Major System Acquisitions:
 - Ch. 02: 2-4, 13-17
 - Ch. 03: 10
 - Ch. 05: 7
 - Ch. 13: 4-5, 9
 - Ch. 38: 3
- OMB Circular A-11, Preparation and Submission of Budget Estimates:
 - Ch. 02: 2-4, 24
 - Ch. 20: 2, 5, 9-10, 18
 - Ch. 21: 4
 - Ch. 28: 3, 5
 - Ch. 29: 6
- OMB Circular A-119, Federal Participation in Development and Use of Voluntary Standards:
 - Ch. 32: 3
- OMB Circular A-127, Financial Management Systems:
 - Ch. 02: 2-4, 18
- OMB Circular A-130, Management of Federal Information Resources:
 - Ch. 01: 11-12, 22
 - Ch. 02: 2-7
 - Ch. 13: 4-5, 9
 - Ch. 19: 2, 5-6, 10-11, 13-14
 - Ch. 20: 5, 7, 15
 - Ch. 21: 4
 - Ch. 22: 10, 20
 - Ch. 26: 24
 - Ch. 28: 3, 5
 - Ch. 31: 12
 - Ch. 35: 5
- OMB Circular A-76 Supplement 1:
 - Ch. 02: 22-23
- OMB Circular A-76 Supplement 2:
 - Ch. 02: 23
- OMB Circular A-76, Performance of Commercial Activities:
 - Ch. 02: 2-4, 19-23
 - Ch. 03: 7
 - Ch. 13: 4-5, 9
 - Ch. 20: 25
 - Ch. 35: 3
 - Ch. 36: 6
- OMB Circular A-94, Guidelines and Discount Rates for Benefit-Cost Analysis of Federal Programs:
 - Ch. 02: 2-4, 8-12
 - Ch. 03: 14
 - Ch. 28: 3, 5-8, 14-16, 18-19, 22, 26-27
 - Ch. 29: 3-6, 17, 19
 - Ch. 30: 4
 - Ch. 36: 6, 20, 23
 - Ch. 42: 4, 6
- Open Architecture:
 - Ch. 14: 21
- Operating System Software:
 - Ch. 06: 16-17
 - Ch. 18: 15
 - Ch. 36: 14
- Operation and Maintenance (O&M) Funds:
 - Ch. 31: 5-6, 8
- Operational Planning:
 - Ch. 20: 13
- Original Equipment Manufacturer (OEM):
 - Ch. 05: 15-16
 - Ch. 06: 17, 19-21
 - Ch. 09: 5, 11, 13, 15-18
 - Ch. 16: 6, 16
 - Ch. 17: 20, 23
 - Ch. 18: 7, 9, 11
 - Ch. 29: 13, 15
 - Ch. 31: 14
 - Ch. 35: 8
 - Ch. 36: 16-17
 - Ch. 40: 8
- Other Than Full and Open Competition:
 - Ch. 01: 15-16
 - Ch. 06: 8
 - Ch. 12: 19-20
 - Ch. 20: 25
 - Ch. 22: 6, 9, 12, 17-18, 31
 - Ch. 23: 2-9, 14
 - Ch. 24: 16, 19, 23
 - Ch. 36: 8, 15
 - Ch. 37: 14
 - Ch. 39: 20
- Other Than Full and Open Competition Justification:
 - Ch. 01: 16
 - Ch. 06: 8
 - Ch. 12: 20
 - Ch. 20: 25
 - Ch. 22: 17, 31
 - Ch. 23: 2, 7-9, 14
 - Ch. 39: 20
- Other Than Principal Period of Maintenance (OPPM):
 - Ch. 09: 10
- Outdated Equipment:
 - Ch. 03: 14
 - Ch. 10: 7
 - Ch. 18: 5-6, 9
 - Ch. 22: 18

Outdated Equipment, Prohibition On Justifying:
Ch. 22: 18
Overview Guide: Acquisition of Information
Resources:
Ch. 3: 22

– P –

Packet Switching:
Ch. 07: 5, 8
Ch. 08: 5
Ch. 14: 23
Ch. 15: 7
Packet Switching of Data:
Ch. 07: 5, 8
Ch. 08: 5
Paperwork Reduction Act of 1980:
Ch. 01: 9, 13, 17-19
Ch. 02: 5
Ch. 06: 3-4, 6, 11
Ch. 13: 3, 7, 12
Ch. 15: 9
Ch. 20: 5, 7, 16
Ch. 22: 10
Ch. 26: 24
Ch. 31: 16
Ch. 33: 3, 6
Ch. 35: 5
Ch. 37: 9
Paperwork Reduction Reauthorization Act of 1986:
Ch. 01: 9, 17-19
Ch. 02: 5
Ch. 06: 3-4, 6
Ch. 13: 3, 7, 12
Ch. 15: 9
Ch. 20: 5, 7, 16
Ch. 31: 16
Ch. 33: 3, 6
Ch. 35: 5
Past Performance:
Ch. 03: 5, 8
Ch. 09: 17
Ch. 17: 23
Ch. 31: 18
Ch. 37: 5
Ch. 38: 1, 3, 8, 13, 17, 20, 24-26
Ch. 41: 15
Ch. 43: 9
Patent Law:
Ch. 11: 5
Performance Planning:
Ch. 20: 7, 15
Performance Specification:
Ch. 32: 7
Performance Validation:
Ch. 06: 9, 12
Ch. 08: 6-7, 12-13, 23
Ch. 15: 7

Ch. 38: 1, 3, 20, 22
Peripherals:
Ch. 06: 15-16
Ch. 10: 6, 11
Ch. 17: 15
Ch. 21: 9
Ch. 25: 5, 7, 12
Ch. 36: 2, 4, 7, 18-19
Personal Computer Memory Card International
Association (PCMCIA):
Ch. 12: 32
Ch. 17: 5-6
Ch. 33: 7
Personal Digital Assistant (PDA):
Ch. 06: 3
Ch. 17: 5-6
Personal and Substantial Participation:
Ch. 04: 15, 30-32
Planning Pyramid:
Ch. 20: 3, 14
Point of Connection:
Ch. 14: 7
Portable Operating System Interface for Computer
Environments (POSIX):
Ch. 12: 33
Ch. 14: 3, 21-22
POSIX:
Ch. 12: 33
Ch. 14: 3, 21-22
POTS:
Ch. 03: 12
Ch. 06: 18
Ch. 13: 14
Ch. 14: 28
Ch. 26: 4
Prenegotiation Memorandum:
Ch. 42: 1-3, 19
Present Value:
Ch. 02: 8, 12
Ch. 03: 14
Ch. 05: 6
Ch. 06: 12
Ch. 14: 13
Ch. 26: 3, 8, 13, 21
Ch. 27: 19, 22-23
Ch. 28: 1-4, 6, 9-20, 22-24, 26-28
Ch. 29: 1, 3, 9, 16, 19-21
Ch. 30: 3, 5-10
Ch. 31: 4
Ch. 36: 11, 25
Ch. 42: 7-10
Present Value Analysis:
Ch. 02: 8
Ch. 28: 1-4, 11, 13-14, 18-20, 22, 26-28
Ch. 30: 6-7, 10
Ch. 36: 11, 25
Present Value Discounting:
Ch. 02: 8, 12

- Ch. 03: 14
- Ch. 26: 3, 8, 13, 21
- Ch. 28: 2, 4, 10-19, 26
- Ch. 29: 1, 3, 16, 19-20
- Presolicitation Conferences:
 - Ch. 33: 9
- Preventive Maintenance:
 - Ch. 05: 15
 - Ch. 08: 11
 - Ch. 09: 6-9
- Price Analysis:
 - Ch. 42: 16
- Price Negotiation Memorandum (PNM):
 - Ch. 42: 1
 - Ch. 43: 6, 10
- Price-Related Factors:
 - Ch. 28: 18
 - Ch. 29: 2, 9
 - Ch. 30: 2-3, 5, 7-12
 - Ch. 35: 12, 15
 - Ch. 36: 1-6, 20-31
 - Ch. 39: 18
 - Ch. 41: 16
 - Ch. 42: 1-3, 6, 10-16, 18, 20
 - Ch. 43: 1-5, 11
 - Applying Price-Related Factors:
 - Ch. 42: 12
- Prices of Materials:
 - Ch. 17: 17
- Principal Period of Maintenance (PPM):
 - Ch. 09: 10
- Privacy Act of 1974:
 - Ch. 01: 9, 12
 - Ch. 02: 5-6
 - Ch. 04: 3, 7
 - Ch. 13: 3, 7
 - Ch. 19: 1-2, 4, 6, 9-11, 13, 19, 25, 29
 - Ch. 22: 20
 - Ch. 27: 17
 - Ch. 39: 20
 - Ch. 43: 8
- Private Branch Exchanges (PBX):
 - Ch. 06: 14, 18
 - Ch. 07: 7-8
 - Ch. 10: 6
 - Ch. 15: 6
 - Ch. 29: 5, 12
 - Ch. 30: 9
 - Ch. 31: 12
- Procurement Funds:
 - Ch. 31: 5
- Procurement Official:
 - Ch. 03: 18
 - Ch. 04: 14-16, 21-22, 26-28, 30-37
- Program Manager (PM):
 - Ch. 03: 18-19
 - Ch. 05: 17
 - Ch. 09: 6-8
- Ch. 21: 1, 11-13
- Ch. 45: 11
- Prohibited Conduct
 - Prohibited Conduct By Competing Contractors:
 - Ch. 04: 21
 - Prohibited Conduct By Procurement Officials:
 - Ch. 04: 21
 - Prohibited Disclosure to Unauthorized Persons:
 - Ch. 04: 22
 - Post-Employment Restrictions:
 - Ch. 04: 8-9, 22, 30-32
- Proposal Pricing:
 - Ch. 43: 2, 4
- Proposal Recommendation
 - Checklist for ~ :
 - Ch. 43: 7-9
- Proposals:
 - Ch. 01: 15
 - Ch. 02: 12
 - Ch. 03: 7
 - Ch. 04: 15, 17-18, 20, 27, 36
 - Ch. 08: 10
 - Ch. 12: 7, 17
 - Ch. 16: 11
 - Ch. 18: 14-15
 - Ch. 19: 28
 - Ch. 20: 25
 - Ch. 29: 18
 - Ch. 30: 6
 - Ch. 32: 5
 - Ch. 33: 13
 - Ch. 34: 3-4
 - Ch. 35: 12-14
 - Ch. 37: 21
 - Ch. 38: 5, 7-8, 11, 13, 19, 25, 27, 29-30
 - Ch. 39: 3, 5, 8, 14-15, 18, 21
 - Ch. 40: 1-4, 7-15
 - Ch. 41: 1, 3-5, 7-8, 11
 - Ch. 42: 2-20
 - Ch. 43: 2-3, 5
 - Ch. 44: 9
 - Ch. 45: 8
 - Proposals, Procedures for Safeguarding:
 - Ch. 40: 13
- Proprietary Data:
 - Ch. 04: 23-25
 - Ch. 19: 13
 - Ch. 40: 14
- Proprietary Information:
 - Ch. 01: 21
 - Ch. 04: 9, 19, 23-25
 - Ch. 40: 12
- Purchase of Telecommunications and Services (POTS):
 - Ch. 03: 12

Ch. 06: 18
 Ch. 13: 14
 Ch. 14: 28, 34
 Ch. 26: 4
 Purchase Option Credits (POC):
 Ch. 29: 13, 22
 Ch. 30: 3, 11
 Ch. 31: 10
 Ch. 42: 9

– Q –

Quality Assurance (QA) Deduction Schedules:
 Ch. 45: 12-14
 Quantitative and Qualitative Requirements:
 Ch. 22: 9
 Ch. 24: 19, 23

– R –

Radar Equipment:
 Ch. 06: 6, 12
 Radio Equipment:
 Ch. 06: 6, 12
 Ch. 15: 11
 Rapid Application Development (RAD):
 Ch. 12: 32, 35-36
 Real Discount Rate:
 Ch. 28: 16, 27
 Records Creation:
 Ch. 19: 9
 Records Disposition:
 Ch. 19: 9
 Records Maintenance and Use:
 Ch. 19: 9
 Records Management:
 Ch. 02: 5
 Ch. 03: 11
 Ch. 08: 23
 Ch. 22: 8-9, 24-25, 27
 Ch. 24: 13, 15-16, 22-23
 Records Management Requirements:
 Ch. 22: 8, 24-25, 27
 Recusal Proposal:
 Ch. 04: 26, 28-29
 Recusal, Eligibility:
 Ch. 04: 27
 Recusal, Evaluation of ~ Proposal:
 Ch. 04: 29
 Refurbishment:
 Ch. 09: 12-13
 Ch. 10: 7
 Regulatory Delegation:
 Ch. 14: 30
 Ch. 36: 8
 Ch. 37: 4-7
 Rehabilitation Act Amendments of 1986:
 Ch. 20: 5, 7-8

Ch. 21: 9
 Rehabilitation Act of 1973:
 Ch. 21: 2, 4, 9
 Rehabilitation Act of 1988:
 Ch. 21: 2, 4, 9
 Reinstatement to Participation in a Procurement:
 Ch. 04: 30
 Remedial Maintenance:
 Ch. 09: 6-9, 11-12
 Repair Time:
 Ch. 09: 10
 Request for Proposals (RFP)
 Ch. 11: 13, 21
 Ch. 12: 32
 Ch. 16: 11
 Ch. 19: 5, 25-27
 Ch. 32: 13
 Ch. 33: 14
 Ch. 35: 14
 Ch. 37: 22
 Ch. 38: 2-3, 11, 25, 27, 29-31
 Ch. 39: 5-6, 8, 15
 Ch. 40: 1-3, 7
 Ch. 41: 5
 Ch. 42: 16, 18
 Ch. 43: 7, 9-10
 Section L:
 Ch. 19: 24, 26
 Ch. 38: 29
 Ch. 39: 6, 14
 Ch. 40: 11
 Section M:
 Ch. 19: 24, 26-27
 Ch. 38: 30
 Ch. 39: 6, 15
 Ch. 41: 5, 9
 Requirements Analysis:
 Ch. 01: 12, 22
 Ch. 03: 12, 22
 Ch. 05: 5
 Ch. 07: 8
 Ch. 08: 7
 Ch. 09: 3, 7, 13
 Ch. 12: 4, 8, 17, 22-23
 Ch. 14: 12-16, 26, 32-33
 Ch. 19: 4-5, 15, 25
 Ch. 20: 6, 12, 26
 Ch. 21: 1-12, 14-15
 Ch. 22: 1-3, 5-11, 13, 19, 21-31
 Ch. 23: 6, 10, 12-13
 Ch. 24: 1-28
 Ch. 25: 6, 13
 Ch. 26: 1-5, 7-13, 20-22, 28
 Ch. 27: 10, 13, 21
 Ch. 31: 4, 13
 Ch. 32: 11, 13
 Ch. 35: 1-3, 7-9
 Ch. 37: 12, 16-17

Ch. 39: 20
 Requirements Analysis, Review Checklist:
 Ch. 24: 23
 Research and Development (R&D) Funds:
 Ch. 31: 5-6
 Residual Value:
 Ch. 28: 21, 27
 Ch. 29: 23
 Ch. 30: 11
 Ch. 36: 2, 4, 7, 10-11, 19
 Response Time:
 Ch. 09: 9-10, 18-19, 21-22, 24
 Ch. 13: 17
 Ch. 42: 15
 Ch. 45: 15, 17
 Response Time Credits:
 Ch. 09: 18, 21-22, 24
 Ch. 45: 15, 17
 Revolving Funds:
 Ch. 01: 19
 Ch. 20: 22
 Ch. 31: 5, 7
 Risk:
 Ch. 05: 5
 Ch. 06: 8
 Ch. 08: 9, 14-15
 Ch. 09: 17
 Ch. 12: 1, 7, 27, 30
 Ch. 14: 16
 Ch. 17: 18, 20
 Ch. 18: 13-16
 Ch. 19: 5, 13-14, 25
 Ch. 20: 24
 Ch. 21: 7
 Ch. 22: 17
 Ch. 23: 8
 Ch. 24: 7
 Ch. 25: 7, 9
 Ch. 26: 12, 18, 20-22
 Ch. 27: 1, 3, 7, 16-18
 Ch. 29: 11, 18
 Ch. 30: 10
 Ch. 31: 17-18
 Ch. 32: 3, 11
 Ch. 34: 1
 Ch. 35: 8, 13
 Ch. 38: 24, 26
 Ch. 39: 18
 Ch. 41: 11, 15
 Ch. 42: 19
 Ch. 43: 5

– S –

Sanitizing Proposals:
 Ch. 40: 1-3, 10-11, 13
 Satellite Communications:
 Ch. 06: 14

Sensitive Information:
 Ch. 01: 22
 Ch. 04: 9
 Ch. 13: 7
 Ch. 19: 1, 4, 9-10, 13-14, 18, 23
 Ch. 20: 8
 Ch. 22: 19-20
 Ch. 24: 20
 Scope Statements
 Poorly-Written Scope Statement:
 Ch. 34: 15, 17
 Well-Written Scope Statement:
 Ch. 34: 2-3, 14-15
 Sealed Bidding:
 Ch. 01: 15
 Ch. 03: 12-13
 Ch. 12: 30
 Ch. 20: 25
 Ch. 28: 18
 Ch. 29: 9
 Ch. 30: 5
 Ch. 35: 10-12
 Security and Privacy:
 Ch. 01: 22
 Ch. 02: 7
 Ch. 03: 15
 Ch. 13: 14
 Ch. 14: 12
 Ch. 19: 3-6, 8, 10-16, 24-25, 29, 32
 Ch. 20: 8
 Ch. 22: 9, 19-20
 Ch. 24: 20, 23
 Security of Federal Automated Information Systems:
 Ch. 02: 7
 Ch. 22: 20
 Service Contract Act of 1965 (41 U.S.C. 351-358):
 Ch. 13: 3, 8
 Ch. 43: 7
 Significant Use:
 Ch. 01: 17
 Ch. 06: 6, 10, 13
 Ch. 15: 13-14, 16, 20
 Ch. 20: 10
 Single Server Concept:
 Ch. 14: 7
 Small Business Act:
 Ch. 01: 16
 Ch. 12: 19
 Small Business and Federal Procurement Competition
 Enhancement Act of 1984:
 Ch. 01: 9, 16-17
 Small Purchase Licensing:
 Ch. 11: 21
 Small Purchases:
 Ch. 01: 1
 Ch. 11: 3, 21
 Ch. 12: 29
 Ch. 26: 17, 27

Index

- Smith-Fess Act of 1920:
 - Ch. 21: 2, 4, 9
- Software Copyright Protection Act:
 - Ch. 11: 5
- Sonar Equipment:
 - Ch. 06: 3, 6, 13
- Source Selection Advisory Council (SSAC):
 - Ch. 38: 10-11
- Source Selection Authority (SSA):
 - Ch. 03: 17-19
 - Ch. 04: 28-29, 33, 37
 - Ch. 12: 31
 - Ch. 35: 8, 14
 - Ch. 38: 10-11, 14, 26-29
 - Ch. 41: 10-12
 - Ch. 42: 11
 - Ch. 43: 1, 5, 9
 - Ch. 44: 9-10
- Source Selection Board (SSB):
 - Ch. 02: 17
 - Ch. 40: 13
 - Ch. 41: 10
 - Ch. 44: 10
- Source Selection Evaluation Board (SSEB):
 - Ch. 38: 5, 10-12, 15, 27-28
- Source Selection Information:
 - Ch. 04: 9, 19-25, 30, 33, 35-36
 - Ch. 43: 8
- Source Selection Plan (SSP):
 - Ch. 03: 7, 18-19
 - Ch. 08: 13
 - Ch. 12: 17
 - Ch. 14: 13
 - Ch. 19: 25
 - Ch. 21: 13
 - Ch. 26: 7
 - Ch. 35: 9, 12
 - Ch. 38: 2-5, 8-11, 14, 19, 21, 26-30
 - Ch. 40: 15
 - Ch. 41: 1-5, 7-9, 16
 - Ch. 42: 6
 - Ch. 43: 4-5, 7
 - Ch. 44: 10
- Source Selection:
 - Ch. 01: 7, 20
 - Ch. 02: 14, 17
 - Ch. 03: 6-7, 10, 14, 18-19
 - Ch. 04: 9, 19-25, 28-30, 33, 35-37
 - Ch. 08: 8, 12-13, 17
 - Ch. 11: 12
 - Ch. 12: 13, 17, 31
 - Ch. 14: 13
 - Ch. 17: 24
 - Ch. 18: 14-15
 - Ch. 19: 25
 - Ch. 21: 13
 - Ch. 23: 3-4
 - Ch. 25: 3
 - Ch. 26: 7
 - Ch. 28: 19
 - Ch. 35: 9, 12, 14
 - Ch. 37: 22
 - Ch. 38: 1-30
 - Ch. 40: 13, 15
 - Ch. 41: 1-5, 7-11, 16
 - Ch. 42: 6
 - Ch. 43: 4-5, 7-8
 - Ch. 44: 5, 10, 12
 - Ch. 45: 6
- Source Selection Information:
 - Ch. 04: 9, 19-25, 30, 33, 35-36
 - Ch. 43: 8
- Acceptance Criteria:
 - Ch. 05: 13
 - Ch. 14: 12
 - Ch. 38: 1, 3, 20-22
 - Ch. 39: 20
- Basic Approaches to ~ :
 - Ch. 38: 13
- ~ Documentation:
 - Ch. 38: 4, 6
- Effectiveness Level:
 - Ch. 38: 1, 3, 20, 24
 - Ch. 40: 3, 7-8
- Formal ~ :
 - Ch. 38: 7
- Informal ~ :
 - Ch. 38: 7
- Objectives of ~ :
 - Ch. 38: 8
- Past Performance:
 - Ch. 03: 5, 8
 - Ch. 09: 17
 - Ch. 17: 23
 - Ch. 31: 18
 - Ch. 37: 5
 - Ch. 38: 1, 3, 8, 13, 17, 20, 24-26
 - Ch. 41: 15
 - Ch. 43: 9
- Purposes of ~ :
 - Ch. 38: 8
- Testing Criteria:
 - Ch. 34: 11
 - Ch. 38: 1, 3, 20-23
- Trade-Offs:
 - Ch. 20: 24
 - Ch. 38: 1, 3, 20
- Sources
 - Potential ~ :
 - Ch. 13: 13
 - Ch. 16: 16-17
 - Ch. 23: 7
 - Ch. 27: 4
- Space and Environment:
 - Ch. 22: 9
 - Ch. 24: 23

Space and Environmental Requirements:

Ch. 22: 8, 23

Specific Acquisition Delegation:

Ch. 14: 31

Ch. 15: 8

Ch. 37: 4, 8, 10

Ch. 39: 20

Specific Agency Delegation:

Ch. 14: 31

Ch. 37: 4, 7-8, 10

Specific Make and Model Justification:

Ch. 06: 9

Ch. 14: 32

Ch. 22: 8, 18

Ch. 23: 10, 13

Ch. 24: 15

Ch. 25: 9

Ch. 32: 8-9

Ch. 37: 16

Specific Make and Model Requirement:

Ch. 02: 10, 20

Ch. 03: 8, 16, 19-20

Ch. 04: 2, 13, 17, 26, 30, 40

Ch. 05: 1

Ch. 06: 8-9, 11, 13

Ch. 07: 5, 8-9

Ch. 08: 11, 14-15, 19

Ch. 09: 5

Ch. 10: 8

Ch. 11: 3, 21

Ch. 12: 8, 13, 17-18, 20-23, 25, 36

Ch. 14: 2-5, 8, 10, 12-20, 23, 31-35

Ch. 15: 1, 8, 19

Ch. 16: 2, 13-15, 17-19

Ch. 17: 4, 9, 14, 21

Ch. 18: 2-3, 8, 10-12, 14

Ch. 19: 1, 3-5, 14, 17, 19-20, 24-26, 29

Ch. 20: 8, 11, 17, 20

Ch. 21: 2-8, 12-13

Ch. 22: 8-11, 14-19, 21, 26, 28, 30

Ch. 23: 1-13

Ch. 24: 5-8, 14, 19-20, 23-25

Ch. 25: 2-4, 6-7, 9-12

Ch. 26: 12, 20-21, 24, 26

Ch. 27: 5-6, 13-15, 20

Ch. 29: 4, 7, 9, 14

Ch. 30: 2, 5

Ch. 31: 4-5, 7, 9-11, 13

Ch. 32: 5, 11-13

Ch. 33: 4-5, 7, 10, 14-15

Ch. 34: 4, 6, 9, 13, 16

Ch. 35: 1-3, 5, 7-8, 11

Ch. 36: 11-12, 15, 17, 25-26, 28-29

Ch. 37: 7, 12-14, 16, 20

Ch. 38: 9, 13, 16, 18, 20, 24, 26

Ch. 39: 7, 10, 12, 18, 20

Ch. 40: 4, 12

Ch. 41: 5, 8, 12

Ch. 44: 5

Ch. 45: 3, 13, 16, 18-19

Specific Make and Model Specification:

Ch. 06: 8

Ch. 22: 18-19

Ch. 23: 6, 9, 11

Ch. 25: 9

Ch. 32: 8

Ch. 35: 8

Ch. 36: 15

Ch. 37: 16

Specific Make and Model, Unacceptable Specification for a:

Ch. 23: 12

Specification Development:

Ch. 08: 1, 7-8

Specifications:

Ch. 01: 10-11

Ch. 02: 7, 13

Ch. 03: 7, 12, 14, 16-17, 19, 22

Ch. 04: 15-16

Ch. 05: 13, 17

Ch. 06: 8-9, 19

Ch. 08: 1, 4, 7-9, 15, 24, 26

Ch. 12: 5-7

Ch. 13: 10

Ch. 14: 13, 25, 32, 35

Ch. 17: 11, 13-14, 21

Ch. 18: 13-14

Ch. 19: 1, 24-26

Ch. 20: 13, 24-25

Ch. 21: 5, 13-14

Ch. 22: 16, 18-19, 25-26

Ch. 23: 6, 9, 11-13

Ch. 25: 9

Ch. 26: 2, 5, 16, 22

Ch. 29: 10

Ch. 31: 4, 6-7, 20

Ch. 32: 1-11, 13-15

Ch. 33: 7, 9, 11, 17

Ch. 34: 1, 3-4, 6, 9, 13

Ch. 35: 1-3, 8-9

Ch. 36: 4, 12, 15, 26

Ch. 37: 16

Ch. 38: 14, 16-18, 20, 22-23

Ch. 39: 5-6, 9, 16, 20

Ch. 41: 3, 5, 7, 12-13

Ch. 42: 17-18

Ch. 43: 8

Ch. 44: 5, 8-9, 12-13

Ch. 45: 6, 13, 18

Performance Specifications:

Ch. 12: 7

Ch. 17: 21

Ch. 18: 13-14

Ch. 20: 13

Ch. 32: 3, 7, 9

Ch. 38: 20, 22

- Design Specifications:
 - Ch. 05: 17
 - Ch. 08: 9
 - Ch. 19: 26
 - Ch. 32: 3, 7, 9
 - Ch. 38: 22-23
- Compatibility-Limited Specifications:
 - Ch. 12: 5
 - Ch. 32: 3, 7
- Specific Make and Model Specifications:
 - Ch. 12: 6
 - Ch. 32: 8
- Using Design and Performance ~ :
 - Ch. 32: 9
- Standard Solicitation Documents (SSDS):
 - Ch. 03: 23
 - Ch. 30: 4
 - Ch. 34: 5
 - Ch. 39: 3, 7, 19
- Standards:
 - Ch. 01: 6, 8, 11, 22
 - Ch. 02: 6, 18
 - Ch. 03: 1-4, 6, 9, 12, 20, 23
 - Ch. 04: 3-13, 16
 - Ch. 05: 13
 - Ch. 06: 11
 - Ch. 08: 2-4, 8, 12-13, 23-25
 - Ch. 10: 10-11, 13
 - Ch. 11: 2, 25
 - Ch. 12: 8
 - Ch. 13: 4-5, 10-12, 16, 21
 - Ch. 14: 2-4, 6, 10, 13, 21-24, 33
 - Ch. 16: 10-11
 - Ch. 17: 5-6, 13, 24
 - Ch. 18: 9
 - Ch. 19: 2, 4, 9-10, 15-16, 20-21, 24
 - Ch. 20: 24
 - Ch. 21: 14
 - Ch. 22: 3, 5-6, 9, 13, 20, 30
 - Ch. 24: 3, 15, 19, 23
 - Ch. 27: 19
 - Ch. 32: 1, 3, 5, 9, 14-15
 - Ch. 33: 1-18
 - Ch. 34: 1, 3-4, 9
 - Ch. 36: 26
 - Ch. 38: 16-18, 21-22, 27-28
 - Ch. 39: 4, 13, 16-17, 20
 - Ch. 41: 7, 12-13
 - Ch. 44: 13
- Agency-Unique ~ :
 - Ch. 33: 7-8, 16
- Alternate ~ :
 - Ch. 33: 7-9
- Categories of ~ :
 - Ch. 33: 6
- ~ Checklist:
 - Ch. 13: 11
 - Ch. 33: 10, 12-14
- Ch. 34: 9
- ~ Decision Table:
 - Ch. 33: 16
- Quantitative vs. Qualitative ~ :
 - Ch. 38: 17-18
- Interim ~ :
 - Ch. 33: 7, 16
- Voluntary ~ :
 - Ch. 32: 3, 5
 - Ch. 33: 7-8, 16
 - Ch. 41: 12
- Standards of Ethical Conduct for Employees of the Executive Branch:
 - Ch. 04: 3, 11, 13
- Statement of Work (SOW):
 - Ch. 03: 19
 - Ch. 04: 15
 - Ch. 14: 13
 - Ch. 19: 1, 24-25
 - Ch. 20: 25
 - Ch. 21: 13
 - Ch. 22: 19-20
 - Ch. 32: 1-2, 4-5, 14
 - Ch. 33: 18
 - Ch. 34: 1-13, 19
 - Ch. 35: 1-3, 12
 - Ch. 36: 4, 12
 - Ch. 38: 14, 16-18
 - Ch. 41: 3
- Stock Fund:
 - Ch. 31: 5, 7
- Strategic Planning:
 - Ch. 20: 3-7, 11, 13-16, 23
 - Ch. 21: 6, 11
 - Ch. 24: 13
 - Ch. 35: 5
- Streamlining:
 - Ch. 17: 23-24
 - Ch. 20: 24
 - Ch. 35: 5
- Subcontract Line Item Number (SUBCLIN):
 - Ch. 42: 7, 10
- Subject Index of Federal and Industry Standards:
 - Ch. 33: 10-11
- Suspension from Participation in a Procurement:
 - Ch. 04: 28
- Switch Matrix Reviews:
 - Ch. 45: 15-16
- Switching Function:
 - Ch. 06: 8, 13
 - Ch. 13: 10
 - Ch. 14: 7
 - Ch. 37: 6-7
- Systems Life:
 - Ch. 02: 16, 24
 - Ch. 03: 13, 16
 - Ch. 04: 42
 - Ch. 05: 1-20

- Ch. 06: 12-13
 - Ch. 09: 3, 7, 26
 - Ch. 10: 9, 12
 - Ch. 12: 16, 18
 - Ch. 18: 4, 8
 - Ch. 20: 10
 - Ch. 21: 6
 - Ch. 22: 8-9, 11-12, 23, 28-29
 - Ch. 24: 3, 15-16, 18, 21, 23
 - Ch. 26: 6, 9, 13
 - Ch. 27: 13, 17-19, 22
 - Ch. 28: 5-7, 15, 18, 20, 22, 24-25
 - Ch. 29: 11, 17, 19, 21
 - Ch. 30: 6-7
 - Ch. 36: 2, 4, 7, 9-10, 16-17
 - Ch. 37: 18
 - Ch. 38: 21
 - System Life Cycle
 - Concept of System Life Cycle:
 - Ch. 05: 5
 - Decisions During the System Life Cycle:
 - Ch. 05: 8
 - Length of System Life:
 - Ch. 05: 8
 - Dod Experience with System Life Costs:
 - Ch. 05: 9
 - System Life-Applicability to FIP Resources:
 - Ch. 05: 9
 - Phases and Steps in the System Life Cycle:
 - Ch. 05: 11
 - Relationship of System Life Cycle and Acquisition Life Cycle:
 - Ch. 05: 11
 - System Life Cycle Phases and Activities:
 - Ch. 05: 11-12
 - System Life, Definition of:
 - Ch. 05: 6
- T –
- Tactical Planning:
 - Ch. 20: 3, 13
 - Tariffs:
 - Ch. 13: 2, 4, 16-18
 - Ch. 14: 10, 29
 - Ch. 42: 13, 15-16, 18-19
 - Technical Assistance:
 - Ch. 08: 24
 - Ch. 09: 3
 - Ch. 12: 12, 29
 - Ch. 13: 12
 - Ch. 16: 12
 - Ch. 21: 14
 - Ch. 22: 3, 20
 - Ch. 26: 16
 - Ch. 35: 5, 9
 - Ch. 38: 19
 - Ch. 41: 9
 - Ch. 45: 5-6
 - Technical Evaluation Plan (TEP):
 - Ch. 41: 7-8
 - Technical Evaluation Process, Steps in the:
 - Ch. 41: 6
 - Technical Evaluation Report:
 - Ch. 43: 4-5
 - Telecommunications Accessibility Act of 1988 (P.L. 100-542):
 - Ch. 13: 3, 8
 - Telecommunications Accessibility Enhancement Act of 1988:
 - Ch. 21: 2, 4, 9-10
 - Telecommunications Device for the Deaf (TDD):
 - Ch. 06: 8, 13
 - Ch. 13: 8, 10, 12
 - Ch. 21: 10
 - Ch. 22: 21-22
 - Telecommunications Facilities:
 - Ch. 06: 8, 13
 - Ch. 13: 6, 14
 - Ch. 14: 7
 - Ch. 37: 7
 - Telecommunications Industry Association (TIA):
 - Ch. 14: 22
 - Telecommunications Resources:
 - Ch. 01: 17
 - Ch. 03: 15
 - Ch. 06: 5, 7-8, 13, 18
 - Ch. 07: 6, 9
 - Ch. 13: 3-4, 6-16, 20-21
 - Ch. 14: 7, 13, 21, 30
 - Ch. 17: 16
 - Ch. 22: 22
 - Ch. 26: 4, 25, 27
 - Ch. 33: 6
 - Ch. 35: 8
 - Ch. 37: 7, 14, 16
 - Telecommunications Services:
 - Ch. 01: 3
 - Ch. 03: 15
 - Ch. 06: 8, 11, 13-14, 18
 - Ch. 07: 9
 - Ch. 13: 6, 11-12, 17-18, 20
 - Ch. 14: 1, 3-4, 6-7, 19, 27-35
 - Ch. 17: 16, 19
 - Ch. 26: 4, 25
 - Ch. 31: 17, 19
 - Ch. 37: 6
 - Ch. 42: 13, 18-19
 - Ch. 45: 15
 - Telecommunications Switching Function:
 - Ch. 06: 8, 13
 - Ch. 13: 10
 - Ch. 14: 7
 - Teleprocessing:
 - Ch. 03: 5
 - Ch. 06: 7

Index

- Ch. 07: 1, 4-6
- Ch. 08: 5
- Ch. 15: 7
- Ch. 26: 12
- Tempest:
 - Ch. 09: 17
 - Ch. 13: 13
 - Ch. 19: 2, 6, 9, 13, 19-20
 - Ch. 20: 8
 - Ch. 26: 17
- Termination Charges:
 - Ch. 13: 13
 - Ch. 14: 7, 17
- Test Plan:
 - Ch. 05: 13
 - Ch. 08: 13-14, 23, 26
 - Ch. 34: 12
 - Ch. 38: 21
 - Ch. 39: 16
 - Ch. 45: 13
- Testing Criteria:
 - Ch. 34: 11
 - Ch. 38: 1, 3, 20-23
- Third Party Vendor:
 - Ch. 06: 19-20
 - Ch. 09: 5, 15-17
 - Ch. 17: 23
 - Ch. 18: 9
 - Ch. 36: 16-17
- Time and Materials (T & M) Contract:
 - Ch. 19: 1, 24, 26-27
 - Ch. 29: 12, 19
 - Ch. 31: 1, 5-6, 9-14
 - Ch. 37: 7, 16, 22
 - Ch. 38: 2-3, 8, 26, 29-31
 - Ch. 41: 5, 9, 14
- Time Bombs:
 - Ch. 19: 30
- Time-Sharing:
 - Ch. 07: 6
- Total System Cost:
 - Ch. 20: 17
- Trade Secrets Act:
 - Ch. 11: 5
 - Ch. 13: 8
- Trade-Offs:
 - Ch. 20: 24
 - Ch. 38: 1, 3, 20
- Trademark Laws:
 - Ch. 11: 5-8
 - Ch. 13: 3, 8
- Trail Boss:
 - Ch. 03: 15, 18-19
 - Ch. 21: 1, 11-13
 - Ch. 35: 8, 14
 - Ch. 36: 8
 - Ch. 37: 4, 8, 12, 17-19
 - Ch. 38: 10-11
- Ch. 43: 5
- Trail Boss APRs:
 - Ch. 37: 12, 17-19
- Trail Boss DPA:
 - Ch. 37: 4, 8
- Training:
 - Ch. 01: 1, 14-15, 22
 - Ch. 03: 5
 - Ch. 04: 18
 - Ch. 05: 3, 5, 12, 14-15, 17
 - Ch. 06: 7, 12
 - Ch. 08: 1, 6, 11, 17, 26
 - Ch. 09: 1, 6, 11
 - Ch. 11: 12
 - Ch. 12: 12, 17, 22, 27
 - Ch. 13: 10
 - Ch. 14: 12, 14, 16
 - Ch. 15: 7
 - Ch. 17: 20
 - Ch. 18: 9
 - Ch. 19: 10-11, 14, 19
 - Ch. 20: 3, 13
 - Ch. 21: 9, 12
 - Ch. 22: 21, 26-28
 - Ch. 24: 7, 22, 27
 - Ch. 25: 7, 10-11
 - Ch. 26: 4, 12, 17
 - Ch. 27: 17-18
 - Ch. 28: 21
 - Ch. 34: 9, 12-13, 17
 - Ch. 36: 3, 5, 9-11, 13-14, 17, 20, 25-26, 31
 - Ch. 38: 10
 - Ch. 39: 12, 16
 - Ch. 41: 15
 - Ch. 42: 11, 15
 - Ch. 45: 6, 8, 11, 18
- Transmittal Circulars (TCS):
 - Ch. 03: 15
- Trapdoor:
 - Ch. 19: 31
- Trojan Horse:
 - Ch. 19: 31
- Trusted Computer System:
 - Ch. 19: 6-9, 16
- Turnkey Acquisition:
 - Ch. 20: 17

– U –

Uniform Contract Format:

- Ch. 01: 7
- Ch. 39: 6

Used Equipment:

- Ch. 10: 7-8
- Ch. 16: 3, 9
- Ch. 18: 6
- Ch. 36: 2, 4, 7, 11

– V –

Validation Plan:

Ch. 05: 13
 Ch. 08: 13
 Ch. 38: 21
 Ch. 41: 8
 Ch. 45: 13

Validation/Compatibility Demonstrations:

Ch. 45: 12

Vaporware:

Ch. 12: 3, 6-8, 22, 27

Viruses, Computer:

Ch. 06: 15
 Ch. 12: 34
 Ch. 19: 1, 30

Voice Mail:

Ch. 07: 1, 5, 7
 Ch. 08: 5
 Ch. 15: 7
 Ch. 26: 12

– W –

Waivers:

Ch. 04: 32
 Ch. 33: 14-15
 Ch. 35: 8

Walsh-Healey Act:

Ch. 06: 21

Walsh-Healey Public Contracts Act Representation:

Ch. 39: 13

Warranty:

Ch. 02: 15
 Ch. 08: 14
 Ch. 09: 8, 15, 17
 Ch. 11: 3, 12, 20
 Ch. 12: 26
 Ch. 16: 16
 Ch. 17: 2, 15, 20-22
 Ch. 18: 15
 Ch. 20: 25
 Ch. 26: 21
 Ch. 35: 12
 Ch. 36: 17
 Ch. 39: 11, 16-17
 Ch. 40: 3, 7-8
 Ch. 42: 15
 Ch. 43: 9

Warranty Costs:

Ch. 17: 21

Washington Interagency Telephone Service (WITS):

Ch. 14: 28, 33
 Ch. 16: 12

WESTLAW:

Ch. 16: 3, 11

Wide Area Network (WAN):

Ch. 14: 2-4, 9

Workload:

Ch. 02: 24
 Ch. 06: 12
 Ch. 08: 8, 24
 Ch. 14: 14, 16
 Ch. 22: 8-9, 23-24, 28
 Ch. 24: 15-16, 21-23
 Ch. 26: 9
 Ch. 27: 6, 13, 17
 Ch. 28: 20
 Ch. 45: 11

Workload, Current and Projected:

Ch. 22: 9
 Ch. 24: 23

FAR 3.104:	Ch. 21: 5
Ch. 04: 3, 14, 19-21, 23, 26, 31-32, 38	Ch. 22: 5, 19
FAR 3.104-11:	Ch. 43: 7
Ch. 04: 41	FAR 7.104:
FAR 3.104-3:	Ch. 20: 23
Ch. 04: 21	Ch. 21: 5
FAR 3.104-4(b):	Ch. 22: 5
Ch. 04: 17	Ch. 37: 14
FAR 3.104-4(c):	FAR 7.105:
Ch. 04: 17	Ch. 20: 24
FAR 3.104-4(f):	Ch. 29: 3, 7, 17
Ch. 04: 18	Ch. 35: 12
FAR 3.104-4(j):	FAR 7.304:
Ch. 04: 19	Ch. 39: 9
FAR 3.104-4(k):	FAR 7.401:
Ch. 04: 19	Ch. 29: 7-8
FAR 3.104-4(l):	Ch. 30: 4
Ch. 04: 20	Ch. 36: 10, 21
FAR 3.104-5:	FAR 10:
Ch. 43: 8	Ch. 10: 3, 9, 11
FAR 3.104-5(d):	Ch. 32: 5
Ch. 43: 8	Ch. 39: 9
FAR 3.104-7:	Ch. 41: 12-13
Ch. 04: 30	Ch. 43: 8
FAR 3.104-8(b):	FAR 10.001:
Ch. 04: 33	Ch. 32: 5
FAR 3.104-8(c):	FAR 10.004(e):
Ch. 04: 33	Ch. 39: 9
FAR 3.104-8(d):	FAR 10.006:
Ch. 04: 35	Ch. 41: 12-13
FAR 3.104-8(e):	FAR 10.010:
Ch. 04: 36	Ch. 10: 3, 9
FAR 3.104-9:	Ch. 43: 8
Ch. 04: 38-41	FAR 10.011:
FAR 3.104-9(b)(3):	Ch. 10: 11
Ch. 04: 39	FAR 12:
FAR 3.104-9(c):	Ch. 09: 25
Ch. 04: 39	Ch. 39: 7, 10
FAR 3.104-9(e)(2):	FAR 12.202:
Ch. 04: 40	Ch. 09: 25
FAR 6.2:	FAR 12.204:
Ch. 23: 3, 13	Ch. 09: 25
FAR 6.3:	Ch. 39: 7
Ch. 01: 4, 15	FAR 15.406(g):
Ch. 23: 13	Ch. 39: 11
FAR 6.302-1(a)(2)(ii):	FAR 15.406-2(a):
Ch. 22: 18	Ch. 39: 8
FAR 6.303:	FAR 15.406-2(b):
Ch. 06: 9	Ch. 39: 8
Ch. 21: 4, 7	FAR 15.406-2(c):
Ch. 22: 18	Ch. 39: 9
Ch. 23: 9	FAR 15.406-2(d):
Ch. 24: 20	Ch. 39: 9
Ch. 43: 7	FAR 15.406-2(e):
FAR 6.304:	Ch. 39: 10
Ch. 23: 8	FAR 15.406-2(f):
FAR 7.103:	Ch. 39: 10
Ch. 20: 23	FAR 15.406-2(h):

FAR Index

Ch. 39: 11
FAR 15.406-3:
Ch. 39: 12
FAR 15.406-4:
Ch. 39: 13
FAR 15.406-5(a):
Ch. 39: 13
FAR 15.406-5(b):
Ch. 39: 14
Ch. 40: 3, 11
FAR 15.406-5(c):
Ch. 39: 15
FAR 15.413:
Ch. 40: 14
FAR 15.601:
Ch. 40: 4-5
FAR 15.605:
Ch. 03: 6, 8
FAR 15.609:
Ch. 42: 17
FAR 15.803(b):
Ch. 42: 13
Ch. 43: 7
FAR 15.804:
Ch. 42: 16, 18
FAR 22.103:
Ch. 42: 16
FAR 22.6:
Ch. 06: 21
FAR 24.104:
Ch. 01: 12
Ch. 22: 20
FAR 25.105:
Ch. 42: 16
FAR 25.4:
Ch. 42: 16
FAR 27.3:
Ch. 11: 4
FAR 27.4:
Ch. 11: 4
FAR 27.401:
Ch. 11: 10, 14-16
Ch. 40: 8
FAR 27.404(h):
Ch. 04: 25
FAR 31.205-2:
Ch. 29: 3, 22-23
FAR 33.101:
Ch. 44 : 3, 6
FAR 33.2:
Ch. 44 : 6
FAR 37.101:
Ch. 08: 18, 20
FAR 37.104:
Ch. 08: 19
FAR 37.2:
Ch. 07: 3
FAR 37.205(b):

Ch. 39: 9
FAR 46:
Ch. 11: 20
Ch. 38: 20
Ch. 39: 10
Ch. 43: 9
FAR 52.202-1:
Ch. 39: 12
FAR 52.203-1:
Ch. 39: 12
FAR 52.203-3:
Ch. 39: 12
FAR 52.203-5:
Ch. 39: 12
FAR 52.210-5:
Ch. 10: 11-12
FAR 52.210-6:
Ch. 10: 11-12
FAR 52.212-4:
Ch. 09: 25
FAR 52.215-12:
Ch. 40: 14
FAR 52.215-7:
Ch. 40: 10
FAR 52.216-22:
Ch. 39: 12
FAR 52.220-1:
Ch. 39: 13
FAR 52.222-19:
Ch. 39: 13
FAR 52.222-21:
Ch. 39: 13
FAR 52.222-22:
Ch. 39: 13
FAR 52.222-25:
Ch. 39: 13
FAR 52.222-26:
Ch. 39: 12
FAR 52.222-28:
Ch. 39: 12
FAR 52.223-1:
Ch. 39: 13
FAR 52.223-5:
Ch. 39: 13
FAR 52.224-1:
Ch. 02: 6
FAR 52.225-1:
Ch. 39: 13
FAR 52.227-14 or 15 Clauses:
Ch. 11: 4
FAR 52.227-16:
Ch. 11: 4
FAR 52.227-17:
Ch. 11: 4
FAR 52.227-18:
Ch. 11: 4
FAR 52.227-19:
Ch. 11: 4

FAR 52.227-20:
 Ch. 11: 4
FAR 52.232-25:
 Ch. 39: 12
FAR 52.246-19:
 Ch. 40: 8
FAR 53.301-1447:
 Ch. 39: 8
FAR 53.301-33:
 Ch. 39: 8

FIRMR 24.001(b):	Ch. 23: 3, 12
Ch. 26: 26	Ch. 24: 17-21
FIRMR 201-1.002:	Ch. 25: 4-5, 8
Ch. 15: 3	Ch. 26: 4, 6, 14, 19, 26
FIRMR 201-1.002-1:	Ch. 27: 5
Ch. 06: 4, 12-13	Ch. 28: 6
FIRMR 201-1.002-1(b)(3):	Ch. 30: 9
Ch. 06: 13	Ch. 31: 17
FIRMR 201-1.003:	Ch. 32: 11, 13
Ch. 14: 31	Ch. 33: 5-7, 15
FIRMR 201-3.402:	Ch. 35: 7-8
Ch. 06: 9	Ch. 36: 12, 15-16
Ch. 14: 33	Ch. 37: 3, 5, 7-8, 16
Ch. 22: 22	Ch. 39: 20
FIRMR 201-4.001	FIRMR 201-20.1:
Ch. 01: 4, 17	Ch. 14: 33
Ch. 05: 4, 6-7	Ch. 21: 3-5
Ch. 07: 3-4	Ch. 22: 3, 8, 18, 26-27, 30
Ch. 08: 4-5, 12	Ch. 35: 7
Ch. 09: 4-5	FIRMR 201-20.102:
Ch. 10: 4	Ch. 22: 7
Ch. 12: 4	FIRMR 201-20.103-1:
Ch. 13: 2, 5-6, 10	Ch. 22: 10
Ch. 14: 6-7, 34	Ch. 24: 17
Ch. 18: 3, 5	FIRMR 201-20.103-10:
FIRMR 201-17.001:	Ch. 22: 24
Ch. 14: 34	FIRMR 201-20.103-11:
Ch. 22: 5	Ch. 22: 25
Ch. 36: 15	FIRMR 201-20.103-2:
FIRMR 201-18:	Ch. 05: 5
Ch. 20: 9, 11, 16	Ch. 22: 11
Ch. 31: 3, 12	Ch. 24: 18
Ch. 35: 5	FIRMR 201-20.103-3:
FIRMR 201-18.001:	Ch. 05: 5
Ch. 20: 9	Ch. 22: 6, 12, 27-28
Ch. 31: 3, 12	Ch. 23: 3, 12
Ch. 35: 5	Ch. 24: 19
FIRMR 201-18.002:	Ch. 36: 15
Ch. 20: 16	FIRMR 201-20.103-4:
Ch. 35: 5	Ch. 06: 8
FIRMR 201-18.002(d):	Ch. 21: 7
Ch. 35: 5	Ch. 22: 17
FIRMR 201-20:	Ch. 24: 20
Ch. 01: 12, 22	Ch. 32: 13
Ch. 03: 15	Ch. 39: 20
Ch. 05: 5	FIRMR 201-20.103-5:
Ch. 06: 8-9	Ch. 06: 9
Ch. 07: 4, 9	Ch. 22: 18
Ch. 08: 4, 23	Ch. 24: 20
Ch. 13: 10-11	Ch. 39: 20
Ch. 14: 6, 26, 31, 33	FIRMR 201-20.103-6:
Ch. 15: 3, 8	Ch. 01: 12, 22
Ch. 17: 9	Ch. 19: 15
Ch. 18: 4, 7	Ch. 22: 19
Ch. 19: 15	Ch. 24: 20
Ch. 20: 11-12	FIRMR 201-20.103-7:
Ch. 21: 3-5, 7, 9	Ch. 13: 10
Ch. 22: 3, 5-8, 10-12, 17-19, 21, 23-28, 30	Ch. 21: 9

FIRMR Index

- Ch. 22: 21
- Ch. 24: 21
- FIRMR 201-20.103-8:
 - Ch. 22: 23
 - Ch. 24: 21
- FIRMR 201-20.103-9:
 - Ch. 22: 23
 - Ch. 24: 21
- FIRMR 201-20.2:
 - Ch. 26: 4, 6
 - Ch. 35: 7
- FIRMR 201-20.202:
 - Ch. 26: 19
 - Ch. 27: 5
- FIRMR 201-20.203:
 - Ch. 17: 9
 - Ch. 18: 7
 - Ch. 25: 8
- FIRMR 201-20.203-2:
 - Ch. 28: 6
 - Ch. 30: 9
- FIRMR 201-20.203-4:
 - Ch. 22: 17
 - Ch. 24: 20
 - Ch. 25: 4-5
 - Ch. 26: 6
 - Ch. 32: 13
 - Ch. 36: 12
- FIRMR 201-20.203-5:
 - Ch. 18: 4
 - Ch. 36: 16
- FIRMR 201-20.303:
 - Ch. 13: 10
 - Ch. 14: 6
 - Ch. 22: 30
 - Ch. 33: 5-7, 15
- FIRMR 201-20.303(c):
 - Ch. 22: 30
 - Ch. 33: 5, 7
- FIRMR 201-20.303(c)(2):
 - Ch. 33: 7
- FIRMR 201-20.303(c)(3):
 - Ch. 33: 7
- FIRMR 201-20.304:
 - Ch. 08: 4, 23
- FIRMR 201-20.305:
 - Ch. 15: 3, 8
 - Ch. 37: 3, 7-8
- FIRMR 201-20.305(b)(3):
 - Ch. 15: 3, 8
- FIRMR 201-20.305-1:
 - Ch. 13: 10
 - Ch. 15: 8
 - Ch. 37: 5
- FIRMR 201-20.305-2:
 - Ch. 37: 7
- FIRMR 201-20.305-3:
 - Ch. 37: 8
- FIRMR 201-20.306:
 - Ch. 07: 9
 - Ch. 13: 11
 - Ch. 14: 31
 - Ch. 31: 17
 - Ch. 35: 8
 - Ch. 37: 16
- FIRMR 201-21.202(b):
 - Ch. 18: 5
- FIRMR 201-21.3:
 - Ch. 02: 7
 - Ch. 19: 15
 - Ch. 22: 20
 - Ch. 39: 20
- FIRMR 201-22.3:
 - Ch. 18: 8, 10
- FIRMR 201-24:
 - Ch. 13: 11, 14
 - Ch. 14: 3, 26, 28-29, 35
 - Ch. 17: 3, 8
 - Ch. 26: 4, 14-15, 25-26
 - Ch. 31: 19
- FIRMR 201-24.001:
 - Ch. 26: 25
- FIRMR 201-24.1:
 - Ch. 13: 11
 - Ch. 14: 26, 35
 - Ch. 26: 14
- FIRMR 201-24.101:
 - Ch. 13: 14
 - Ch. 14: 3
 - Ch. 17: 3, 8
 - Ch. 26: 25
- FIRMR 201-24.102:
 - Ch. 14: 28
 - Ch. 26: 25
 - Ch. 31: 19
- FIRMR 201-24.104:
 - Ch. 14: 29
- FIRMR 201-24.106:
 - Ch. 14: 28
 - Ch. 26: 25
- FIRMR 201-24.107:
 - Ch. 26: 25
- FIRMR 201-24.2:
 - Ch. 13: 11
 - Ch. 14: 26
 - Ch. 26: 15
- FIRMR 201-24.201:
 - Ch. 26: 26
- FIRMR 201-24.201-1:
 - Ch. 14: 29
- FIRMR 201-24.202:
 - Ch. 26: 26
- FIRMR 201-24.203:
 - Ch. 17: 8
 - Ch. 26: 26
- FIRMR 201-39.1001:

- Ch. 43: 7
- FIRMR 201-39.1003:
 - Ch. 03: 14
 - Ch. 43: 8
- FIRMR 201-39.101-3:
 - Ch. 15: 3, 13-14
- FIRMR 201-39.104-1:
 - Ch. 14: 33
- FIRMR 201-39.14:
 - Ch. 03: 13
- FIRMR 201-39.1401:
 - Ch. 28: 18
 - Ch. 29: 9
 - Ch. 30: 5
- FIRMR 201-39.1402-1:
 - Ch. 28: 19
- FIRMR 201-39.15:
 - Ch. 03: 13-14
 - Ch. 17: 24
 - Ch. 29: 9
 - Ch. 30: 5
 - Ch. 41: 5
- FIRMR 201-39.1501-1:
 - Ch. 36: 13
- FIRMR 201-39.1501-2:
 - Ch. 30: 5
- FIRMR 201-39.1503:
 - Ch. 03: 14
- FIRMR 201-39.1701-6:
 - Ch. 30: 5
 - Ch. 43: 8
- FIRMR 201-39.2:
 - Ch. 15: 3, 5
- FIRMR 201-39.33:
 - Ch. 44 : 4, 6
- FIRMR 201-39.5202-1:
 - Ch. 15: 3, 20
- FIRMR 201-39.5202-4(b):
 - Ch. 29: 9
- FIRMR 201-39.5205-5:
 - Ch. 02: 6
- FIRMR 201-39.6:
 - Ch. 22: 18
 - Ch. 23: 9
 - Ch. 24: 20
 - Ch. 36: 15
- FIRMR 201-39.601:
 - Ch. 36: 15
 - Ch. 43: 7
- FIRMR 201-39.601-2:
 - Ch. 22: 19
- FIRMR 201-39.602:
 - Ch. 03: 14
- FIRMR 201-39.602-1:
 - Ch. 18: 6
 - Ch. 22: 18
- FIRMR 201-39.602-2:
 - Ch. 22: 18
- FIRMR 201-39.8:
 - Ch. 13: 11
 - Ch. 26: 4
- FIRMR 201-39.803:
 - Ch. 10: 8
 - Ch. 22: 19
 - Ch. 23: 9
- FIRMR Bulletin A-1:
 - Ch. 01: 17, 19
 - Ch. 03: 15
 - Ch. 06: 5-7, 14
 - Ch. 07: 6, 9
 - Ch. 08: 6, 19
 - Ch. 09: 4-5
 - Ch. 10: 6
 - Ch. 12: 7
 - Ch. 14: 34
 - Ch. 15: 2-3, 5, 17-21
 - Ch. 26: 24
- FIRMR Bulletin C-1:
 - Ch. 07: 6, 9
- FIRMR Bulletin C-10:
 - Ch. 14: 6
 - Ch. 20: 8
 - Ch. 22: 22
- FIRMR Bulletin C-11:
 - Ch. 26: 24
- FIRMR Bulletin C-12:
 - Ch. 12: 4
 - Ch. 26: 26
- FIRMR Bulletin C-14:
 - Ch. 25: 7
 - Ch. 36: 13-14
 - Ch. 39: 20
- FIRMR Bulletin C-15:
 - Ch. 06: 18
 - Ch. 14: 5, 7, 17, 28
 - Ch. 26: 25
- FIRMR Bulletin C-18:
 - Ch. 03: 15
 - Ch. 06: 18
 - Ch. 07: 9
 - Ch. 13: 14
 - Ch. 14: 6-7, 18-19
 - Ch. 26: 25
 - Ch. 31: 19
- FIRMR Bulletin C-18 (Rev 1):
 - Ch. 03: 15
- FIRMR Bulletin C-19:
 - Ch. 14: 5-6, 28-29
 - Ch. 26: 26
- FIRMR Bulletin C-2:
 - Ch. 10: 8
 - Ch. 18: 3, 5-6
 - Ch. 26: 26
- FIRMR Bulletin C-20:
 - Ch. 07: 7
 - Ch. 14: 28

FIRMR Index

Ch. 26: 25
FIRMR Bulletin C-21:
Ch. 03: 15
Ch. 06: 18
Ch. 14: 29, 35
Ch. 31: 12
FIRMR Bulletin C-22:
Ch. 02: 7
Ch. 03: 15
Ch. 19: 6, 15
Ch. 22: 20
FIRMR Bulletin C-24:
Ch. 03: 15
Ch. 26: 17
FIRMR Bulletin C-24 (Rev 1):
Ch. 03: 15
FIRMR Bulletin C-25:
Ch. 03: 15
Ch. 30: 4, 6
FIRMR Bulletin C-26:
Ch. 03: 15
Ch. 44 : 4
FIRMR Bulletin C-27:
Ch. 09: 4, 8
Ch. 10: 8
Ch. 18: 3, 8, 10-11
FIRMR Bulletin C-29:
Ch. 03: 15
Ch. 10: 7-8
Ch. 18: 3, 6
Ch. 43: 8
FIRMR Bulletin C-3:
Ch. 33: 4
FIRMR Bulletin C-31:
Ch. 03: 15
FIRMR Bulletin C-32:
Ch. 08: 11
FIRMR Bulletin C-34:
Ch. 03: 15
Ch. 22: 22
FIRMR Bulletin C-35:
Ch. 10: 11-12
Ch. 22: 25-26
Ch. 42: 3, 14
FIRMR Bulletin C-4:
Ch. 08: 8, 23
FIRMR Bulletin C-5:
Ch. 03: 15
Ch. 07: 9
Ch. 31: 17
Ch. 35: 7
Ch. 36: 8
Ch. 37: 8, 15, 17, 19-21
FIRMR Bulletin C-7:
Ch. 03: 15, 18
Ch. 21: 12
Ch. 35: 8
Ch. 37: 8, 17, 19

FIRMR Bulletin C-8:
Ch. 03: 15
Ch. 20: 8
Ch. 22: 22
Ch. 32: 6
FIRMR Bulletin C-9:
Ch. 16: 12

DFARS 207.1:
 Ch. 35: 3

DFARS 212:
 Ch. 39: 10

DFARS 215.8:
 Ch. 42: 3, 18

DFARS 222.10:
 Ch. 07: 3

DFARS 227.3:
 Ch. 11: 4

DFARS 227.4:
 Ch. 11: 4

DFARS 227.401:
 Ch. 11: 4, 15

DFARS 227.402:
 Ch. 11: 4

DFARS 227.403:
 Ch. 11: 4

DFARS 227.405:
 Ch. 11: 4

DFARS 233.104:
 Ch. 44 : 4, 15

DFARS 237.102:
 Ch. 31: 3, 9

DFARS 237.205-71:
 Ch. 39: 9

DFARS 239.001:
 Ch. 15: 3, 12
 Ch. 26: 4

DFARS 239.001-70:
 Ch. 01: 4
 Ch. 15: 12

DFARS 239.73:
 Ch. 31: 10
 Ch. 42: 11

DFARS 239.74:
 Ch. 13: 2

DFARS 239.7407-2:
 Ch. 14: 30

DFARS 239.75:
 Ch. 31: 12

DFARS 239-7401:
 Ch. 06: 4

DFARS 246:
 Ch. 39: 10
 Ch. 43: 9

DFARS 252.227-7013:
 Ch. 11: 16
 Ch. 12: 4

DFARS Part 252:
 Ch. 39: 7, 12